SITE INSPECTION
OF
PROCINO PLATING

DNREC SITE INVESTIGATION AND RESTORATION SECTION

DE-0344
September 2011

Prepared by:
John G. Cargill
Site Investigation and Restoration Section
Department of Natural Resources and
Environmental Control
391 Lukens Drive
New Castle, DE 19720

Reviewed and Approved by:
Qazi Salahuddin
Environmental Program Manager I
Site Investigation and Restoration Section
Department of Natural Resources and
Environmental Control
391 Lukens Drive
New Castle, DE 19720

EXECUTIVE SUMMARY

The Delaware Department of Natural Resources and Environmental Control, Site Investigation and Restoration Section (DNREC-SIRS), in cooperation with the United States Environmental Protection Agency (EPA), has conducted a Site Inspection (SI) at the Procino Plating facility (Site) located in Blades, Delaware.

The SI is intended to evaluate the extent to which a site presents a threat to human health or the environment by collecting and analyzing environmental media samples to determine whether hazardous substances are present and are migrating to the surrounding environment. The SI is not intended to be a detailed extent-of-contamination assessment or risk assessment. Therefore, information presented in this report for the Procino Plating facility should not be used as a means of contaminant delineation or as an indicator of source determination. This can only be characterized through further investigation.

Procino Plating is located at 901 South Market Street in Blades, Delaware. The site is approximately 1.16 acres in size, is comprised of two tax parcels (132-1.15-187.00 and 132-1.15-188.00), and is located at the intersection of South Market Street and 9th Street. The land use surrounding the Site is primarily residential.

The Site has been operational as a metal plating operation since the 1980's. Soil and groundwater data generated through this assessment was evaluated by DNREC-SIRS from an industrial use, residential use and drinking water use standpoint since the Site is surrounded by residential properties, and because area residents hydraulically downgradient of the Site utilize groundwater for drinking water purposes.

Iron was detected in soil samples PPMW-03D, PPSB-01D and PPSB-04D at concentrations exceeding its DNREC Uniform Risk-Based Remediation Standard (URS) in a Critical Water Resource Area for Unrestricted Use. Concentrations did not exceed the DNREC URS in a Critical Water Resource Area for Restricted Use, or the EPA Regional Screening Levels (RSLs) for Residential or Industrial use. Other metals were not detected at concentrations in excess of applicable standards.

Volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs) were not detected in the shallow or deep soil samples selected for confirmatory analysis at concentrations in excess of regulatory standards.

Chloroform was detected in the groundwater sample collected from site monitoring well PPMW-06 at an estimated concentration of 0.9 micrograms per liter (ug/l). The DNREC Groundwater URS for chloroform is 0.1 ug/l. The concentration is below the EPA RSL for Tapwater and the EPA Maximum Contaminant Level (MCL). Chloroform is also a common laboratory artifact. Other VOCs were not detected at concentrations in excess of regulatory standards.

SVOCs were not detected in groundwater samples collected from the Site monitoring wells at concentrations in excess of regulatory standards.

Dieldrin was detected in the groundwater sample collected from monitoring wells PPMW-03, PPMW-05 and the PPMW-01duplicate sample at concentrations exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS. An EPA MCL does not exist for Dieldrin. Heptachlor epoxide was detected in the groundwater sample collected from monitoring well PPMW-03 at a concentration exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS, but below its EPA MCL. PCBs were not detected in the groundwater samples collected from Site monitoring wells.

Aluminum was detected in the total metals sample collected from monitoring well PPMW-01 and the PPMW-01 duplicate sample at a concentration exceeding its DNREC groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for aluminum. Aluminum was not detected in the dissolved metals sample from the same well or the duplicate. Nickel was detected in the total and dissolved metals sample collected from monitoring well PPMW-06 at a concentration exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for nickel. Chromium was detected in the total and dissolved groundwater sample collected from monitoring well PPMW-06 at a concentration in excess of its DNREC Groundwater URS and its EPA MCL. Cyanide was not detected in any of the groundwater samples collected from Site monitoring wells.

Barium was detected in six of the private water supply well samples collected in May 2010 and April 2011 at concentrations exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater and its EPA MCL. Manganese was detected in 11 of the private water supply well samples collected in May 2010 and April 2011 at concentrations in excess of its DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. Zinc was detected in the sample collected from one private water supply well in May 2010 at a concentration exceeding is DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. The same supply well was sampled again in April 2011, and although present, the concentration of zinc was below all applicable standards.

Cyanide was detected in one drinking water sample collected in April 2011. Although the concentration was low (0.02 mg/l, or 20 ug/l), it merits mentioning due to the uncommon nature of the detection. Review of the data and chromatograms by the DNREC-SIRS Senior Chemist indicated that the detected concentration was not an artifact of the laboratory analysis, and that the cyanide was present in the sample. The water supply well that the sample was collected from is screened at a depth of 43 to 48 feet below ground surface.

Surface water, sediment and air samples were not collected as part of this SI.

RECOMMENDATIONS

DNREC-SIRS recommends additional assessment at the Site in the form of a remedial investigation (RI) to further evaluate the horizontal and vertical extent of chromium detected in the groundwater from monitoring well PPMW-06 at concentrations exceeding EPA MCLs. In addition, the presence of pesticides in monitoring wells PPMW-01, PPMW-03 and PPMS-05 should be evaluated further since concentrations exceed DNREC and EPA screening levels. Because only shallow groundwater quality was evaluated through the SI, deeper groundwater quality needs to be evaluated for its potential impact to private water supply wells hydraulically downgradient of the Site, specifically from cyanide, and also for its potential impact to sediments in the Nanticoke River due to groundwater discharge.

The recommended RI can be conducted through the DNREC-SIRS Voluntary Cleanup Program (VCP).

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION

The Delaware Department of Natural Resources and Environmental Control, Site Investigation and Restoration Section (DNREC-SIRS), in cooperation with the United States Environmental Protection Agency (EPA), has developed this Site Inspection (SI) report for the Procino Plating facility (Site), located in Blades, Sussex County, Delaware (Figure 1).

The purpose of this SI was to investigate the possible existence of released hazardous substances at the Site through the collection and analysis of environmental samples. The analytical data generated from the collection and laboratory analysis of the environmental samples has been subsequently evaluated to determine the potential for human and environmental exposures to hazardous substances.

The objective of this assessment was not to define the full extent of site contamination or to conduct a risk assessment. Instead, DNREC-SIRS has prepared this SI report along with the evaluation of data to determine whether the Site should undergo further investigation or obtain a "No Further Action" (NFA) designation under the Federal Superfund and/or DNREC-SIRS Programs.

2. BACKGROUND INFORMATION

2.1. SITE LOCATION AND DESCRIPTION

Procino Plating is located at 901 South Market Street in Blades, Sussex County, Delaware. A site features map is shown as Figure 2. The Site is approximately 1.16 acres in size, is comprised of two tax parcels (132-1.15-187.00 and 132-1.15-188.00), and is located on the corner of South Market Street and West 9th Street. The central coordinates for the Site is latitude 38° 37'48" by longitude 75° 36'34". The elevation of the Site is an average of 10-20 feet above mean sea level with flat topography (Figure 3). Water and sewer service is supplied to the Site by the Town of Blades. According to the property owner, the Site is currently an active plating facility, although the extent of plating operations has been reduced to hard chrome plating for griddle tops, and minor aluminum etching.

The Site is surrounded by residential properties to the north, south and east. Rail-road tracks are located adjacent to the site towards the west, with a residential community located on the opposite side of the rail-road tracks.

According to the National Weather Service Data, the average yearly temperature in this area is 56 degrees Fahrenheit. In general, the month with the lowest average temperature is January, with average temperatures in the mid 30's. July has the highest average temperature, with averages in the mid 70's. The average annual precipitation is approximately 47 inches.

2.2. HISTORICAL SITE USES AND LAYOUT

No Sanborn Fire Insurance Maps were available for review of the Site area. However, DNREC-SIRS reviewed aerial photographs for the years 1937, 1954, 1961, 1968, 1992, 1997, 2002, and 2007 (Figures 4 – 11). The following is a chronological summary based on the review of the aerial photographs.

1937 The aerial photograph is of poor quality. The Site appears to be an undeveloped agricultural field. The surrounding parcels also appear to be agricultural fields (Figure 4).

1954 The Site appears to have one building located on the eastern portion of the property (Figure 5). It also appears that the surrounding properties have not been developed. However, several surrounding properties look like they have been cleared and sited for potential development. The Town of Blades appears to be developing and expanding.

1961 The aerial photo is of poor quality. The Site appears to be unchanged, with the one building in the eastern portion of the property. The surrounding properties appear to have been developed into residential properties (Figure 6).

1968 The aerial photograph is of poor quality. The Site and adjacent properties appear unchanged. The Town of Blades, however, has expanded (Figure 7).

1992 The aerial photograph shows considerable change to the Town of Blades, but the Site appears unchanged when compared to the 1968 aerial photo (Figure 8).

1997 The Site appears to have two additional buildings on the western portion of the property (Figure 9). The surrounding properties appear unchanged from the 1992 aerial photograph.

2002 A shed like structure appears to have been added onto the south side of the western Site buildings (Figure 10). Surrounding properties appear unchanged.

2007 The aerial photograph is concentrated on the Site. The Site and surrounding properties appear to be unchanged from the 2002 aerial photograph (Figure 11).

The current property owners purchased the two parcels in May and July of 1996. Additional ownership information can be found in Appendix A. The Site has been operational as a metal plating operation since the 1980's. Past use of the Site prior to a plating operation was not obtained by DNREC-SIRS.

3. DNREC – ASSESSMENT RATIONALE AND SITE VISIT SUMMARY

In response to information obtained from the DNREC-Solid and Hazardous Waste Management Section (SHWMS) regarding improper handling of hazardous waste at the site, an area reconnaissance was conducted on May 19, 2010 with the Delaware Division of Public Health (DPH) Office of Drinking Water (ODW). The ODW was asked to accompany DNREC-SIRS to the area to sample any registered/permitted private water supply wells within the Town of Blades limits to determine if any chemicals were present that could possibly have originated from the Procino Plating facility. On the same day, SIRS personnel accompanied ODW staff during the collection of compliance samples from the two Town of Blades water supply wells. Only a few of the registered private water supply wells were found by DNREC-SIRS, each of which appeared to be out of service. As a check, water from an outdoor spigot from each of the residences where private water supply wells were registered was tested for the presence of chlorine, which would indicate that the water was being supplied by the Town of Blades. Each home that was tested by ODW was confirmed for the presence of chlorine. During the compliance sampling of the Town's water supply wells, the facility's Operator told DNREC and ODW that the community west of the Procino Plating facility and across the railroad tracks were all served by private water supply wells, because the community is located outside the municipal limits of the Town. SIRS and ODW personnel investigated the area and obtained permission to collect drinking water samples from 4 (four) residences. Detailed results of the sampling are discussed below. However, zinc was detected in one of the water supply wells at a concentration in excess of its EPA Secondary Maximum Contaminant Level (MCL).

Based upon the information obtained in May 2010, DNREC-SIRS decided to utilize EPA Preliminary Assessment/Site Inspection (PA/SI) funding to investigate the Site. The PA was completed and submitted to EPA in October 2010. As indicated in the PA, DNREC-SIRS personnel accompanied representatives from the DNREC-Solid and Hazardous Waste Management Section (SHWMS) on a site visit on September 14, 2010. During that visit, information was provided by Mr. Patrick Procino to SIRS staff regarding the past and current plating operations at the facility. A summary of that visit can be obtained from the PA for the Site. Results of the PA indicated that operations at the Site had the potential to impact soil and groundwater, and a SI was recommended.

During the planning stages for the SI, DNREC-SIRS and ODW personnel again visited the community located to the west of the Procino Plating facility to collect additional private water supply well samples. A total of 12 private water supply wells were sampled on April 28, 2011.

DNREC-SIRS personnel mobilized to the Site to perform soil sampling and monitoring well installation associated with the SI on May 24, 25 and 26, 2011. Thirteen (13) soil borings and six (6) monitoring wells were installed. The monitoring wells were sampled on June 16 and 17, 2011.

4. METHODOLOGIES

4.1. SAMPLING

DNREC sampled both shallow and deep soil from each soil boring/monitoring well location during this SI. In total, DNREC collected twenty-six (26) soil samples from thirteen (13) sample locations. DNREC also installed six (6) groundwater monitoring wells using a Geoprobe® rig, and collected one groundwater sample from each well. Soil boring and monitoring well locations are shown on Figure 12. Quality control samples were also collected for both soil and groundwater. All soil samples were screened in the DNREC-SIRS laboratory prior to determining which samples would be submitted to a fixed laboratory for confirmatory analysis. Groundwater samples were not screened at the DNREC-SIRS laboratory, but were submitted directly to a fixed laboratory.

Field sampling and sample handling adhered to the procedures as specified in the State of Delaware Site Inspection Quality Assurance Project Plan (QAPP). A copy of the QAPP is available for review at the office of the Department of Natural Resources and Environmental Control, 391 Lukens Drive, New Castle, Delaware, 19720.

In addition to the samples mentioned above, a total of sixteen (16) private water supply well samples from thirteen (13) locations were collected during the SI in cooperation with Delaware's ODW. All of the samples were submitted directly to a fixed laboratory for confirmatory analysis.

4.1.1. SOILS

DNREC collected twenty-six (26) soil samples and appropriate QA/QC samples from thirteen (13) sample locations during this SI using a Geoprobe® rig and direct push sampling techniques. Soil borings were installed on May 24, 25 and 26, 2011.

Soil samples were collected in 5-foot acetate sleeves (cores), continuously, until the top of the water table was reached. Each acetate sleeve was removed from the macrocore sampler and split lengthwise to reveal the soil section. After each acetate sleeve was split, the core was screened with a Photovac® portable photo ionization detector (PID) and then logged by a DNREC–SIRS Hydrologist. No measurements above background readings (zero) were recorded for soil at the

Site. Composited shallow soil samples were collected from the top twenty-four (24) inches of the first core in each borehole. A composited deep sample was collected, generally, from the twenty-four (24) inches immediately above the water table. The shallow and deep samples collected for volatile organic compound (VOC) analysis were collected from the split acetate sleeve using a 10 milliliter (ml) syringe, and placed into a 40 ml VOA vial containing approximately 25 ml of methanol. The remaining soil was homogenized with disposable plastic scoops in a disposable food-grade aluminum pan and put into sterilized 8-ounce wide mouth glass jars for semivolatile organic compound (SVOC), pesticide/polychlorinated biphenyl (PCB), metals and cyanide analysis. The jars were appropriately labeled, placed in zip-lock bags, and stored in coolers with ice for transportation. The bore holes were subsequently backfilled with the remaining excavated material and sealed with bentonite as needed. Soil sample locations are shown on Figure 12. Soil boring logs are included as Appendix B.

4.1.2.GROUNDWATER

DNREC installed six (6) groundwater monitoring wells on May 24 and 25, 2011 to assess the groundwater quality beneath the Site. Monitoring wells were constructed using 1-inch diameter polyvinylchloride (PVC) well casing and 10 feet of 1-inch diameter, 0.010 inch slot size, PVC pre-packed well screen. A pre-packed bentonite seal was used to seal the well screen from the surface. All of the monitoring wells were finished at grade using flush-mounted steel manways set into an approximate 16 inch square concrete pad. The monitoring wells were installed by a Delaware licensed well driller in accordance with the Delaware Regulations Governing the Construction and Use of Wells, April 6, 1997. All drilling activities were supervised by a DNREC-SIRS Hydrologist. Monitoring well locations are shown on Figure 12.

The monitoring wells were developed by pumping with a peristaltic pump and disposable tubing. The wells were surged several times during development with the well development tubing. Stabilization parameters of pH, temperature, specific conductance, dissolved oxygen and turbidity (visual) were noted at regular intervals during well development. Once the water was relatively free of suspended material, and all stabilization parameters were within approximately 10% of the previous reading, well development was discontinued. Well development logs are included in Appendix C.

On June 16 and 17, 2011, DNREC collected six (6) groundwater samples and appropriate QA/QC samples from the groundwater monitoring wells. Groundwater was collected from the wells using a peristaltic pump and disposable tubing. Each well was purged using low flow sampling techniques and until stabilization parameters, as noted above, were within approximately 10% of the previous reading. Three VOA vials preserved with hydrochloric acid (HCl) were filled first for VOC analysis. Two, 2-liter unpreserved amber jars were filled each for SVOCs, pesticides, and PCB analysis (total of 6). Next, one 250 ml polyurethane container preserved with sodium hydroxide (NaOH) was filled for cyanide analysis. Finally, two, 500 ml polyurethane containers preserved with nitric acid (HNO3) were filled for total metals and dissolved metals. The sample collected for dissolved metals analysis was filtered through a .45 micron in-line filter to remove the suspended solids within the sample. All sample bottles were appropriately labeled and placed in coolers with ice for transportation. Groundwater sampling logs are included in Appendix D.

4.1.3.DRINKING WATER

On May 19, 2010, DNREC-SIRS and ODW collected samples of drinking water from 4 residences located in a community to the west of the Site. Permission was obtained from each of

the property owners prior to collecting the sample. Each sample was collected by an ODW certified Drinking Water Sampling Technician in laboratory supplied containers. Samples were collected for VOCs, trace metals and cyanide.

On April 28, 2011, DNREC-SIRS and ODW collected twelve samples from the same community mentioned above, in the same manner as mentioned above. Samples were collected for trace metals and cyanide only. A map of the community where drinking water samples were collected is shown on Figure 13.

4.2. QUALITY ASSURANCE/QUALITY CONTROL

The QA/QC sample program requires that samples be collected to evaluate the quality of field sampling practices and equipment decontamination practices, including trip blanks, field duplicates, laboratory duplicates, and/or field rinsate blanks. An explanation of each follows below:

Trip Blanks consist of four (4) forty milliliter glass vials filled with distilled water and sealed with a Teflon lined cap. Trip blanks are used to evaluate the potential for cross contamination of site samples from contamination sources outside the sampling area. Trip blanks are filled with distilled water prior to sampling, sealed, transported to the sampling site and returned to the laboratory without reopening for analysis. Trip blanks are analyzed for VOCs only.

Field duplicates consist of an actual sample for which twice as much volume as necessary has been collected. Aliquots of this volume are then distributed in two sets of sample containers and submitted to the laboratory as two separate samples. Field duplicates are used to assess the consistency of sampling homogeneity and laboratory analytical consistency. One field duplicate was collected for soil and one field duplicate was collected for groundwater during this SI.

Laboratory duplicates (also referred to as Matrix Spike/Matrix Spike Duplicate [MS/MSD]) represent a sample location in which twice the normal sample volume is collected. The purpose of the laboratory duplicate is to provide the analytical laboratory with a sample which can also serve to calibrate analytical machinery. The laboratory duplicate is normally spiked with a known concentration of chemical and this sample is used to calibrate the instrument. One MS/MSD was collected for soil and one MS/MSD was collected for groundwater during this SI.

Field Rinsate blanks were not collected during this sampling event since all of the samples were collected using sterile disposable sampling equipment.

4.3. SAMPLE ANALYSIS

Sample analysis consists of all or part of the USEPA Target Analyte List (Inorganics) and Target Compound List (Organics) (TAL/TCL). The TAL/TCL analytes are commonly associated with environmental and human health concerns because they are routinely found in former industrial and land filled areas.

All soil samples collected during this SI were first screened in the DNREC-SIRS laboratory for the following classes of compounds: VOCs, pesticides, SVOCs, polycyclic aromatic hydrocarbons (PAHs), PCBs, total petroleum hydrocarbons (TPH) and metals. Screening was performed using a portable Gas Chromatography/Mass Spectroscopy (GC/MS) and an X-Ray Fluorescence machine (XRF). Screened soil samples identified as having elevated concentrations of contaminants for a particular chemical suite were chosen for confirmatory analysis. Partial and/or full TAL/TCL confirmatory analysis may be conducted upon samples based on the results of the DNREC-SIRS

laboratory screening. Groundwater samples were not screened in the DNREC-SIRS laboratory, but were delivered directly to a confirmatory laboratory for full TAL/TCL analysis. The screening data associated with the Procino Plating site is included in Appendix E.

A GC/MS System was used by the confirmatory laboratory to analyze soil and groundwater samples for SVOCs, VOCs, pesticides and PCBs. Metals were analyzed using an Atomic Absorption Unit and an Inductively Coupled Plasma Unit (AA and ICP). Analysis using the GC/MS system and AA and ICP provides a good tool by which to determine the presence or absence of compounds and analytes at sites under investigation.

For this SI, five (5) of the soil samples (19%) and six (6) of the groundwater samples (100%), plus quality assurance/quality control (QA/QC) samples were submitted to a fixed laboratory for confirmatory analysis of chemicals of concern (COCs). The DNREC Environmental Laboratory in Dover, Delaware performed the analysis of VOCs, SVOCs and metals for both soil and groundwater samples. Test America, Inc. in Edison, NJ performed the analysis of pesticides, PBCs and cyanide for both soil and groundwater samples. Chain of custody records for soil and groundwater samples are included in Appendix F.

Drinking water samples collected for VOCs, trace metals and cyanide on May 19, 2010 were analyzed by the Delaware Public Health Laboratory in Smyrna, Delaware. Drinking water trace metals samples collected on April 28, 2011 were also analyzed by the Delaware Public Health Laboratory. Cyanide samples collected on April 28, 2011 were analyzed by Atlantic Coast Laboratories, Inc. in Newark, Delaware.

All analytical results were compared to appropriate EPA Regional Screening Levels for soil and/or tapwater, and Maximum Contaminant Levels (MCLs) for drinking water. In addition, results were compared to appropriate Delaware Uniform Risk-Based Remediation Standards (DE URS) for the Protection of Human Health as published in the DNREC-SIRS Remediation Standards Guidance under the Delaware Hazardous Substance Cleanup Act (HSCA), Revised December 1999. Soil, groundwater and drinking water analytical results are summarized in Tables 2 through 10, and are provided in Appendices G, H and I, respectively.

5. SOIL EXPOSURE PATHWAY

5.1. PHYSICAL SETTING/SOIL MORPHOLOGY

The Site is mostly covered by office space and warehouse type buildings. A very small portion of the east and south side of the property is grass covered. Paved parking areas extend the length of the northern side of the property, and a dirt access road and unpaved equipment storage areas occupy the west side of the property.

According to the U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS) soil mapping report for Sussex County, the Site area consists of Evesboro loamy sand (EvB). The Evesboro loamy sand has a slope of 2-5%. This soil is found on ridges or on the sides of ridges within or adjacent to areas of Evesboro loamy sand, loamy substratum (EvA) with a 0-2% slope. Small areas of this substratum can have sand to the depth of 6 feet below ground surface. The substratum is finer textured and has the ability to hold moisture, making it better suited for crop cultivation. Woodland stands in the area mainly consist of second-growth hardwoods, but loblolly pine dominates in areas that were once cultivated.

5.2. SOIL TARGETS

Given the current Site land use, contact with potentially contaminated soils would be limited to targets such as visitors, business operators, customers, trespassers, adjacent property owners and migratory animals. There are no daycare facilities or schools within the 200 foot soil exposure pathway. The closest daycare is one mile east of the Site and the closest school is 0.17 miles east of the site. According to 2000 census data, there are approximately 454 people residing within a quarter mile of the Site, and approximately 3,020 people within one mile of the Site.

5.3. SOIL ANALYTICAL RESULTS

VOCs, SVOCs, pesticides and PCBs were not detected in the shallow or deep soil samples selected for confirmatory analysis at concentrations in excess of regulatory standards. VOC analytical results in soil are summarized in Table 2. SVOC analytical results in soil are summarized in Table 3. Pesticide and PCB analytical results in soil are summarized in Table 4.

Iron was detected in soil samples PPMW-03D, PPSB-01D and PPSB-04D at concentrations exceeding its DNREC URS in a Critical Water Resource Area for Unrestricted Use. Concentrations did not exceed the DNREC URS in a Critical Water Resource Area for Restricted Use, or the EPA RSLs for Residential or Industrial use. Other metals were not detected at concentrations in excess of applicable standards. Metals analytical results for soil are summarized in Table 5.

Soil analytical results are provided in Appendix F.

6. GROUNDWATER EXPOSURE PATHWAY

6.1. HYDROGEOLOGIC SETTING

6.1.1. REGIONAL HYDROGEOLOGIC SETTING

Information on the hydrogeologic setting was obtained from the Delaware Geological Survey, and information from the DNREC Division of Water Resources. According to information reviewed, the Site is located entirely within the Atlantic Coastal Plain physiographic province. The sedimentary beds gently dip southeast toward the Atlantic Ocean. The maximum total thickness of sediments is 4,200 feet in the northern portion of the Atlantic Coastal Plain and 5,200 feet thick in the southeastern portion. The general elevation of the Site is 10-20 feet above mean sea level.

The Procino Plating Site is situated on Nanticoke deposits of the area. The Nanticoke deposits consist of brown to light gray, fine- to medium-grained sand. The deposits are finely laminated to structure-less gray to brown clayey sandy silt, silty clayey sand and rare beds of gravelly coarse- to medium-grained sand. Some areas consist of shelly sandy silt, and sandy clayey silt with woody fragments. The Nanticoke deposits unconformably overlie the Pliocene aged Beaverdam Formation.

The Beaverdam Formation consists of light gray to white coarse- to very coarse-grained sand with beds of fine- to medium-grained sand. There is often a silt to clayey silt matrix in the area which can appear white when brought to the surface. Beds of sandy silt, clayey sandy silt, and clayey silt are common. The thickness of this Formation can be 75 to 100 feet. The Beaverdam

Formation is within the unconfined Columbia aquifer. This aquifer has a poor to excellent yield and minor confining beds.

The Cat Hill Formation (sometimes called Manokin Formation) underlies the Beaverdam Formation in the area of the Site, and contains the Manokin Aquifer. This formation is subdivided into subunits A and B. Subunit A consist of gray, blue-gray, and brown-gray silty clayey sand and silty sand with scattered lignite. Subunit B is made up of light to medium gray, or yellow-orange to red-orange, medium- to fine- and course-grained quartz sand with common beds of gravelly sand, and less common beds of clayey to silty sand. The thickness of the Cat Hill Formation can vary from a feather edge to 50 feet thick. The St. Mary's Formation conformably underlies Subunit A and is gradational into Subunit B.

The St. Mary's Formation is made up of blue-gray, green-gray, or gray silty sandy clay, clayey sandy silt, and silty clay, with beds of fine- to medium-grained quartz sand, and fine- to medium-grained gravel in a mud matrix. This formation can be up to 110 feet thick.

6.1.2. LOCAL HYDROGEOLOGIC SETTING

Based on the review of the well logs generated during the drilling of monitoring wells, the shallow geology beneath the Site can generally be described as tan, brown and orange fine to medium grained sands to a depth of approximately 18 feet below ground surface underlain by tan to gray medium to coarse grained sands to a depth of at least 20 feet below ground surface.

Based on water level information gathered from site monitoring wells installed during this SI, shallow groundwater is present between 8 and 11 feet below the ground surface (bgs), and groundwater flow is towards the south-southwest (Figure 14). Monitoring well construction information, survey information, and calculated groundwater elevations are summarized in Table 1. Soil boring logs area included in Appendix B.

6.2. GROUNDWATER SETTING AND TARGETS

The Site is connected to the Town of Blades public water supply. The nearest public well is approximately 0.20 miles north of the Site. The nearest offsite domestic well is approximately 110 feet from the western border of the Site.

Information gathered for the PA at the Site indicated that approximately 4,698 individuals could be using the groundwater for drinking purposes within four miles of the Site. This number may be higher due to wells constructed prior to 1970, when DNRECs well permitting program was initiated. A community located to the west of the Site is not connected to a public water supply. Each tax parcel contains its own private water supply well.

There are 18 well head protection areas within four miles of the Site. In addition, the Site is located within a well head protection area for the Town of Blades water supply wells.

6.3. GROUNDWATER ANALYTICAL RESULTS

6.3.1. ONSITE GROUNDWATER

Chloroform was detected in the groundwater sample collected from site monitoring well PPMW-06 at an estimated concentration of 0.9 micrograms per liter (ug/l). The DNREC Groundwater URS for chloroform is 0.1 ug/l. The concentration is below the EPA RSL for Tapwater and the

EPA MCL. Chloroform is also a common laboratory artifact. Other VOCs were not detected at concentrations in excess of regulatory standards. VOC analytical results in groundwater are summarized in Table 6.

SVOCs were not detected in groundwater samples collected from the Site monitoring wells at concentrations in excess of regulatory standards. SVOC analytical results in groundwater are summarized in Table 7.

Dieldrin was detected in the groundwater sample collected from monitoring wells PPMW-03, PPMW-05 and the PPMW-01duplicate sample at concentrations exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS. An EPA MCL does not exist for Dieldrin. Heptachlor Epoxide was detected in the groundwater sample collected from monitoring well PPMW-03 at a concentration exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS, but below its EPA MCL. PCBs were not detected in the groundwater samples collected from Site monitoring wells. Pesticide and PCB analytical results in groundwater are summarized in Table 8.

Aluminum was detected in the total metals sample collected from monitoring well PPMW-01 and The PPMW-01 duplicate sample at a concentration exceeding its DNREC groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for aluminum. Aluminum was not detected in the dissolved metals sample from the same well or the duplicate. Nickel was detected in the total and dissolved metals sample collected from monitoring well PPMW-06 at a concentration exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for Nickel. Chromium was detected in the total and dissolved groundwater sample collected from monitoring well PPMW-06 at a concentration in excess of its DNREC Groundwater URS and its EPA MCL. Cyanide was not detected in any of the groundwater samples collected from site monitoring wells. Metals analytical results in ground water are summarized in Table 9.

Groundwater analytical results are provided in Appendix G.

6.3.2.OFFSITE GROUNDWATER/DRINKING WATER

Barium was detected in six of the private water supply well samples collected in May 2010 and April 2011 at concentrations exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater and its EPA MCL. Manganese was detected in 11 of the private water supply well samples collected in May 2010 and April 2011 at concentrations in excess of its DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. Zinc was detected in the sample collected from one private water supply well in May 2010 at a concentration exceeding is DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. The same supply well was sampled again in April 2011, and although present, the concentration of zinc was below all applicable standards.

Cyanide was detected in one drinking water sample collected in April 2011. Although the concentration was low (0.02 mg/l, or 20 ug/l), it merits mentioning due to the uncommon nature of the detection. Review of the data and chromatograms by the DNREC-SIRS Senior Chemist indicated that the detected concentration was not an artifact of the laboratory analysis, and that the cyanide was present in the sample. The water supply well that the sample was collected from is screened at a depth of 43 to 48 feet below ground surface.

Analytical results of drinking water well samples is summarized in Table 10, and provided in Appendix H. The locations of the samples are shown on Figure 13.

7. SURFACE WATER AND SEDIMENT EXPOSURE PATHWAY

7.1. HYDROLOGIC SETTING

The Town of Blades is situated inside a bend of the Nanticoke River, directly across from the Town of Seaford, Delaware. The direction of surface water flow, based on topography and site characteristics, appears to be westerly toward the Nanticoke River and the Chesapeake Bay.

The Nanticoke River is approximately 1,300 feet from the western border of the site. The Nanticoke River winds through Delaware and Maryland until it reaches Chesapeake Bay. According to Federal Emergency Management (FEMA) information, the Site lies outside the 500 year flood zone.

7.2. SURFACE WATER AND SEDIMENT SETTING

A review of the Delaware Natural Heritage and Endangered Species Program (NHESP) database was conducted to identify any possible state or federally listed threatened or endangered plants, animals or natural communities within the 15 mile surface water pathway from the Site. According to NHESP, there are currently no rare state or federally listed plants, animals or natural communities at the Site. However, there is numerous state and federally threatened/endangered species listed approximately 3-5 miles downstream and upstream from the Site. There are additional species located within the 15 mile downstream and seven (7) mile upstream extent of the surface water pathway for tidal water bodies.

According to the Surface Water Branch, there are no surface water intakes for potable water in Sussex County.

7.3. SURFACE WATER AND SEDIMENT ANALYTICAL RESULTS

Because surface water and sediment bodies are not located onsite, no surface water or sediment samples were collected during this SI. However, the potential exists, through groundwater discharge, for Site related contaminants to impact the sediments in the Nanticoke River.

8. AIR EXPOSURE PATHWAY

8.1. AIR TARGETS

Site visitors, business operators, customers, trespassers, and adjacent property owners are possible air targets. There are 6 daycares and 11 schools within a four (4) mile air target pathway. The closest daycare is one mile east of the Site and the closest school is 0.17 miles east of the site. According to 2000 census data, there are approximately 454 people residing within a quarter mile of the Site, and approximately 3,020 people within one mile of the Site, and approximately 19,380 people within the four (4) mile air exposure pathway of the Site.

Exposure to site contaminants is not likely to follow a soil or ground-water to air pathway.

8.2. AIR ANALYTICAL RESULTS

A formal air sampling program was not conducted as part of this investigation. Air monitoring was, however, preformed during sampling as part of the Health and Safety Plan (HASP) utilizing a PID. There were no PID readings above background levels detected during sampling activities.

9. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

9.1. SUMMARY

Between May 24 and 26, 2011, DNREC-SIRS personnel collected twenty six (26) soil samples, including both shallow and deep samples, and installed six (6) groundwater monitoring wells at the Site. Groundwater samples were collected from the site monitoring wells on June 16 and 17, 2011. All soil samples were screened in the DNREC-SIRS laboratory for VOCs, SVOCs, pesticides, PCBs, and total metals prior to choosing samples for confirmatory analysis by a fixed laboratory. Each of the 6 groundwater samples (and QA/QC samples) was submitted to a fixed laboratory for analysis. A total of 5 soil samples were analyzed for the full US EPA TAL/TCL analyte list based on screening laboratory results. Each of the groundwater samples was analyzed for the full US EPA TAL/TCL analyte list.

On May 19, 2010 (during completion of the Preliminary Assessment), DNREC-SIRS and ODW personnel collected drinking water samples from four (4) residences located to the west of the Site. On April 28, 2011, twelve (12) drinking water samples were collected from the neighborhood located to the west of the Site.

Iron was detected in soil samples PPMW-03D, PPSB-01D and PPSB-04D at concentrations exceeding its DNREC URS in a Critical Water Resource Area for Unrestricted Use. Concentrations did not exceed the DNREC URS in a Critical Water Resource Area for Restricted Use, or the EPA RSLs for Residential or Industrial use. Other metals were not detected at concentrations in excess of applicable standards.

VOCs, SVOCs, Pesticides and PCBs were not detected in the shallow or deep soil samples selected for confirmatory analysis at concentrations in excess of regulatory standards.

Chloroform detected in the groundwater sample collected from site monitoring well PPMW-06 at an estimated concentration of 0.9 micrograms per liter (ug/l). The DNREC Groundwater URS for chloroform is 0.1 ug/l. The concentration is below the EPA RSL for Tapwater and the EPA MCL. Chloroform is also a common laboratory artifact. Other VOCs were not detected at concentrations in excess of regulatory standards.

SVOCs were not detected in groundwater samples collected from the Site monitoring wells at concentrations in excess of regulatory standards.

Dieldrin was detected in the groundwater sample collected from monitoring wells PPMW-03, PPMW-05 and the PPMW-01duplicate sample at concentrations exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS. An EPA MCL does not exist for Dieldrin. Heptachlor Epoxide was detected in the groundwater sample collected from monitoring well PPMW-03 at a concentration exceeding its EPA RSL for Tapwater and the DNREC Groundwater URS, but below its EPA MCL. PCBs were not detected in the groundwater samples collected from Site monitoring wells.

Aluminum was detected in the total metals sample collected from monitoring well PPMW-01 and The PPMW-01 duplicate sample at a concentration exceeding its DNREC groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for aluminum. Aluminum was not detected in the dissolved metals sample from the same well or the duplicate. Nickel was detected in the total and dissolved metals sample collected from monitoring well PPMW-06 at a concentration exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater. An EPA MCL does not exist for Nickel. Chromium was detected in the total and dissolved groundwater sample collected from monitoring well PPMW-06 at a concentration in excess of its DNREC Groundwater URS and its EPA MCL. Cyanide was not detected in any of the groundwater samples collected from site monitoring wells.

Barium was detected in six of the private water supply well samples collected in May 2010 and April 2011 at concentrations exceeding its DNREC Groundwater URS, but below its EPA RSL for Tapwater and its EPA MCL. Manganese was detected in 11 of the private water supply well samples collected in May 2010 and April 2011 at concentrations in excess of its DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. Zinc was detected in the sample collected from one private water supply well in May 2010 at a concentration exceeding is DNREC Groundwater URS and its EPA Secondary MCL, but below its EPA RSL for Tapwater. The same supply well was sampled again in April 2011, and although present, the concentration of zinc was below all applicable standards.

Cyanide was detected in one drinking water sample collected in April 2011. Although the concentration was low (0.02 mg/l, or 20 ug/l), it merits mentioning due to the uncommon nature of the detection. Review of the data and chromatograms by the DNREC-SIRS Senior Chemist indicated that the detected concentration was not an artifact of the laboratory analysis, and that the cyanide was present in the sample. The water supply well that the sample was collected from is screened at a depth of 43 to 48 feet below ground surface.

Surface water, sediment and air samples were not collected as part of this SI.

9.2. CONCLUSIONS

The Site has been operational as a metal plating operation since the 1980's. Soil and groundwater data generated through this assessment was evaluated by DNREC-SIRS from an industrial use, residential use and drinking water use standpoint since the site is surrounded by residential properties, and because area residents hydraulically downgradient of the Site utilize groundwater for drinking water purposes.

Iron detected in the soil samples is well within the range of typical Delaware background soil concentrations (3,000 to 22,000 mg/kg) as reported in the HSCA Remediation Standards Guidance. Therefore it is not considered a potential contaminant of concern (COC) by DNREC-SIRS.

Since dieldrin and heptachlor epoxide were detected in groundwater at concentrations exceeding EPA and DNREC screening levels, they should be considered potential COCs in groundwater.

The chromium detected in Site monitoring well PPMW-06 was reported at concentrations around 10 times the DNREC URS and the EPA MCL, and is considered a potential COC in groundwater by DNREC-SIRS.

Nickel is commonly used for plating, and was detected in the groundwater samples from one Site monitoring well. Although the concentrations do not exceed EPA Screening Levels, DNREC-SIRS considers Nickel a potential COC in groundwater.

The iron detected in dissolved groundwater samples from one well (and its duplicate) at the site, although above DNREC URS values, is not considered a COC because iron is commonly detected at slightly elevated concentrations throughout the State.

Manganese was the only metal detected in the drinking water samples (from several wells) collected at a concentration in excess of its MCL or Secondary MCL. Due to the lack of health related effects from manganese, it is not considered a COC in the drinking water.

9.3. RECOMMENDATIONS

DNREC-SIRS recommends additional assessment at the Site in the form of a remedial investigation (RI) to further evaluate the horizontal and vertical extent of chromium detected in the groundwater from monitoring well PPMW-06 at concentrations exceeding EPA MCLs. In addition, the presence of pesticides in monitoring wells PPMW-01, PPMW-03 and PPMS-05 should be evaluated further since concentrations exceed DNREC and EPA screening levels.

It should also be noted that only shallow groundwater was evaluated during this SI. The uncommon detection of cyanide in an offsite drinking water well from a depth of between 43 and 48 feet below ground surface, coupled with the fact that 1) cyanide containing solutions are commonly used in plating operations, and 2) a polyethylene tank was noted on the property with the words "Cyanide Treatment 2" stenciled on the side, raises concern for an undetected release from the Site. The presence of any Site related compound at a depth greater than approximately 20 feet below ground surface was not evaluated as part of the SI. Therefore, DNREC-SIRS recommend further evaluation groundwater below a depth of 20 feet at the site. In addition, it is recommended that additional private waters supply wells be tested and analyzed for the presence of total metals and cyanide, as indicated on Figure 14.

Lastly, information reviewed by DNREC-SIRS in relation to sediment contamination in the Nanticoke River (DNREC, 1997) indicates that the concentrations of metals in sediments is much greater downstream of Seaford/Blades than upstream. Since the Procino Plating facility is located less than 1,500 feet hydraulically upgradient of the river, the potential exists for site related contaminants to enter the river and impact sediments through groundwater discharge. Without additional information related to the groundwater quality at a depth greater than 20 feet below ground surface, Site related impact to the sediment in the Nanticoke River cannot be ruled out.

The recommended Remedial Investigation can be conducted through DNREC-SIRS' Voluntary Cleanup Program (VCP).

JGC:tlw
JGC11032.doc
DE 0344 II A 3

TABLES

Procino Plating DE-0344

Table 1
Monitoring Well Information and Groundwater Elevations
Procino Plating (DE-0344)
Blades, Delaware

Monitoring Well ID	Well Permit Number	Construction Date	Well Diameter (inches)	Well Depth (ft)	Screened Interval (ft)	Top of Casing Elevation (ft)	Top of Ground Elevation (ft)	Measured Depth To Water (ft below top of casing) 5/26/2011	Groundwater Elevation (ft)
PPMW-01	235312	5/24/2011	1	18	8 - 18	100	100.27	8.58	91.42
PPMW-02	235308	5/24/2011	1	18	8 - 18	99.86	100.23	8.30	91.56
PPMW-03	235307	5/24/2011	1	18	8 - 18	101.23	101.60	9.50	91.73
PPMW-04	235309	5/25/2011	1	18	8 - 18	103.41	103.60	11.56	91.85
PPMW-05	235310	5/25/2011	1	19	9 - 19	102.87	103.12	11.18	91.69
PPMW-06	235311	5/25/2011	1	18	8 - 18	102.03	102.27	10.43	91.60

Notes:
Wells constructed using one inch Geoprobe pre-pack well screens and bentonite seals.
Wells were surveyed by DNREC-SIRS with an arbitrary vertical datum of 100 feet at the PPMW-01 top of casing.

Table 2
Summary of Soil Analytical Results - VOCs
Procino Plating (DE-0344)
Blades, Delaware

Sample					PPMW-03 D	PPMW-06 D	PPSB-01 S	PPSB-04 D	PPSB-05 S
Sample Date					5/24/2011	5/25/2011	5/24/2011	5/26/2011	5/25/2011
Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chemical Name	EPA RSL Residential (mg/kg)	EPA RSL Industrial (mg/kg)	DNREC URS CWRA Unrestricted Use (mg/kg)	DNREC URS CWRA Restricted Use (mg/kg)					
Volatile Organic Compounds by Method SW8260									
1,1,1-TRICHLOROETHANE	8700	38000	20	20	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	0.56	2.8	0.2	0.2	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	43000	180000	640	640	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	1.1	5.3	0.5	0.5	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	3.3	17	8	8	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	240	1100	0.07	0.7	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	22	99	28	28	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.0054	0.069	0.02	0.02	ND	ND	ND	ND	ND
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.034	0.17	0.008	0.01	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	1900	9800	60	60	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	0.43	2.2	0.4	0.5	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	0.94	4.7	0.5	0.5	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	NCA	NCA	61	61	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	2.4	12	10	10	ND	ND	ND	ND	ND
2-HEXANONE	210	1400	15	15	ND	ND	ND	ND	ND
ACETONE	61000	630000	6	6	ND	ND	ND	ND	ND
BENZENE	1.1	5.4	0.5	0.5	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	0.27	1.4	10	10	ND	ND	ND	ND	ND
BROMOFORM	62	220	10	10	ND	ND	ND	ND	ND
BROMOMETHANE	7.3	32	1	1	ND	ND	ND	ND	ND
CARBON DISULFIDE	820	3700	10	10	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	0.61	3	0.3	0.5	ND	ND	ND	ND	ND
CHLOROBENZENE	290	1400	10	10	ND	ND	ND	ND	ND
CHLOROETHANE	15000	61000	0.4	0.4	ND	ND	ND	ND	ND
CHLOROFORM	0.29	1.5	0.3	10	ND	ND	ND	ND	ND
CHLOROMETHANE	120	500	0.3	0.3	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	160	2000	0.6	0.6	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	NCA	NCA	0.008	0.008	ND	ND	ND	ND	ND
CYCLOHEXANE	7000	29000	1000	1800	ND	ND	ND	ND	0.016 J
DIBROMOCHLOROMETHANE	0.68	3.3	0.01	0.01	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	94	400	100	100	ND	ND	ND	ND	ND
ETHYLBENZENE	5.4	27	70	70	ND	ND	ND	ND	ND
ISOPROPYLBENZENE (CUMENE)	2100	11000	110	110	ND	ND	ND	ND	ND
M,P-XYLENE (SUM OF ISOMERS)	NCA	NCA	420	420	ND	ND	ND	ND	ND
METHYL ACETATE	78000	1000000	61	61	ND	ND	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	28000	200000	19	19	ND	ND	ND	ND	ND
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	5300	53000	1	1	ND	ND	ND	ND	ND
METHYL TERT-BUTYL ETHER (MTBE)	43	220	2	2	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE	NCA	NCA	NCA	NCA	ND	ND	0.036 J	ND	0.05 J
METHYLENE CHLORIDE	11	53	0.5	0.5	ND	ND	0.023 J	0.023 J	0.021 J
O-XYLENE (1,2-DIMETHYLBENZENE)	690	3000	410	410	ND	ND	ND	ND	ND
STYRENE	6300	36000	24	24	ND	ND	ND	ND	ND
TETRACHLOROETHENE	0.55	2.6	0.5	0.5	ND	ND	ND	ND	ND
TOLUENE	5000	45000	100	100	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	150	690	10	10	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	NCA	NCA	0.008	0.008	ND	ND	ND	ND	ND
TRICHLOROETHENE	2.8	14	0.5	0.5	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	790	3400	200	200	ND	ND	ND	ND	ND
VINYL CHLORIDE	0.06	1.7	0.03	0.2	ND	ND	ND	ND	ND
XYLENES, TOTAL	630	2700	420	420	ND	ND	ND	ND	ND

Notes:
mg/kg - milligrams per kilogram
NCA - No Criteria Available
ND - Not Detected
J - Estimated Concentration
DNREC URS CWRA - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health in a Critical Water Resource Area

Table 3
Summary of Soil Analytical Results - SVOCs
Procino Plating (DE-0344)
Blades, Delaware

Sample					PPMW-03 D	PPMW-06 D	PPSB-01 S	PPSB-04 D	PPSB-05 S
Sample Date					5/24/2011	5/25/2011	5/24/2011	5/26/2011	5/25/2011
Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chemical Name	EPA RSL Residential (mg/kg)	EPA RSL Industrial (mg/kg)	DNREC URS CWA Unrestricted Use (mg/kg)	DNREC URS CWA Restricted Use (mg/kg)					
Semivolatile Organic Compounds by Method SW8270									
1,1-BIPHENYL	51	210	3	3	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	22	99	28	28	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	1900	9800	60	60	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	NCA	NCA	61	61	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	2.4	12	10	10	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	6100	62000	220	220	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	44	160	2	2	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	180	1800	2	2	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	1200	12000	7	7	ND	ND	ND	ND	ND
2,4-DINITROPHENOL	120	1200	0.7	0.7	ND	ND	ND	ND	ND
2,4-DINITROTOLUENE	1.6	5.5	0.7	0.7	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	61	620	0.4	0.4	ND	ND	ND	ND	ND
2-CHLORONAPHTHALENE	6300	82000	620	620	ND	ND	ND	ND	ND
2-CHLOROPHENOL	390	5100	4	4	ND	ND	ND	ND	ND
2-METHYLNAPHTHALENE	310	4100	1	1	ND	ND	ND	ND	ND
2-METHYLPHENOL (O-CRESOL)	3100	31000	18	18	ND	ND	ND	ND	ND
2-NITROANILINE	610	6000	0.02	0.02	ND	ND	ND	ND	ND
2-NITROPHENOL	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	1.1	3.8	1	6	ND	ND	ND	ND	ND
3-NITROANILINE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
4,6-DINITRO-2-METHYLPHENOL	4.9	49	0.04	0.04	ND	ND	ND	ND	ND
4-BROMOPHENYL PHENYL ETHER	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
4-CHLORO-3-METHYLPHENOL	6100	62000	NCA	NCA	ND	ND	ND	ND	ND
4-CHLOROANILINE	2.4	8.6	2	2	ND	ND	ND	ND	ND
4-CHLOROPHENYL PHENYL ETHER	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
4-METHYLPHENOL (P-CRESOL)	310	3100	2	2	ND	ND	ND	ND	ND
4-NITROANILINE	24	86	NCA	NCA	ND	ND	ND	ND	ND
4-NITROPHENOL	NCA	NCA	6	6	ND	ND	ND	ND	ND
ACENAPHTHENE	3400	33000	270	270	ND	ND	ND	ND	ND
ACENAPHTHYLENE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
ACETOPHENONE	7800	100000	0.0004	0.0004	ND	ND	ND	ND	ND
ANTHRACENE	17000	170000	1000	5000	ND	ND	ND	ND	ND
ATRAZINE	2.1	7.5	0.3	0.3	ND	ND	ND	ND	ND
BENZALDEHYDE	7800	100000	37	37	ND	ND	ND	ND	ND
BENZO(A)ANTHRACENE	0.15	2.1	0.9	8	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.015	0.21	0.09	0.8	ND	ND	ND	ND	ND
BENZO(B)FLUORANTHENE	0.15	2.1	0.9	8	ND	ND	ND	ND	ND
BENZO(G,H,I)PERYLENE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
BENZO(K)FLUORANTHENE	1.5	21	9	78	ND	ND	ND	ND	ND
BIS(2-CHLOROETHOXY) METHANE	180	1800	NCA	NCA	ND	ND	ND	ND	ND
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.21	1	0.0001	0.0001	ND	ND	ND	ND	ND
BIS(2-CHLOROISOPROPYL) ETHER	4.6	22	9	30	ND	ND	ND	ND	ND
BIS(2-ETHYLHEXYL) PHTHALATE	35	120	46	130	ND	ND	ND	ND	ND
BUTYL BENZYL PHTHALATE	260	910	930	5000	ND	ND	ND	ND	ND
CAPROLACTAM	31000	310000	180	180	ND	ND	ND	ND	ND
CARBAZOLE	NCA	NCA	0.3	0.3	ND	ND	ND	ND	ND
CHRYSENE	15	210	87	780	ND	ND	ND	ND	ND
DIBENZ(A,H)ANTHRACENE	0.015	0.21	0.09	0.8	ND	ND	ND	ND	ND
DIBENZOFURAN	78	1000	0.2	0.2	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	49000	490000	500	500	ND	ND	ND	ND	ND
DIMETHYL PHTHALATE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	6100	62000	NCA	NCA	ND	ND	ND	ND	ND
DI-N-OCTYLPHTHALATE	NCA	NCA	7	7	ND	ND	ND	ND	ND
FLUORANTHENE	2300	22000	310	1800	ND	ND	ND	ND	ND
FLUORENE	2300	22000	300	300	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	0.3	1.1	0.4	1	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	6.2	22	1	1	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	370	3700	10	90	ND	ND	ND	ND	ND
HEXACHLOROETHANE	35	120	0.6	0.6	ND	ND	ND	ND	ND
INDENO(1,2,3-C,D)PYRENE	0.15	2.1	0.9	8	ND	ND	ND	ND	ND
ISOPHORONE	510	1800	10	10	ND	ND	ND	ND	ND
NAPHTHALENE	3.6	18	5	5	ND	ND	ND	ND	ND
NITROBENZENE	4.8	24	0.04	0.04	ND	ND	ND	ND	ND
N-NITROSODI-N-PROPYLAMINE	0.069	0.25	0.001	0.001	ND	ND	ND	ND	ND
N-NITROSODIPHENYLAMINE	99	350	2	2	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	0.89	2.7	5	5	ND	ND	ND	ND	ND
PHENANTHRENE	NCA	NCA	1000	5000	ND	ND	ND	ND	ND
PHENOL	18000	180000	400	400	ND	ND	ND	ND	ND
PYRENE	1700	17000	230	1700	ND	ND	ND	ND	ND

Notes:
mg/kg - milligrams per kilogram
NCA - No Criteria Available
ND - Not Detected
DNREC URS CWRA - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health in a Critical Water Resource Area

Table 4
Summary of Soil Analytical Results - Pesticides & PCBs
Procino Plating (DE-0344)
Blades, Delaware

Sample					PPMW-03 D	PPMW-06 D	PPSB-01 S	PPSB-04 D	PPSB-05 S
Sample Date					5/24/2011	5/25/2011	5/24/2011	5/26/2011	5/25/2011
Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chemical Name	EPA RSL Residential (mg/kg)	EPA RSL Industrial (mg/kg)	DNREC URS CRWA Unrestricted Use (mg/kg)	DNREC URS CRWA Restricted Use (mg/kg)					
Pesticides by Method SW8081									
ALDRIN	0.029	0.1	0.0004	0.0004	ND	ND	ND	ND	ND
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	0.077	0.27	0.001	0.001	ND	ND	ND	ND	ND
ALPHA ENDOSULFAN	NCA	NCA	NCA	NCA	ND	ND	ND	ND	0.027
ALPHA-CHLORDANE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	0.033 P
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.27	0.96	0.004	0.004	ND	ND	ND	ND	ND
BETA ENDOSULFAN	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NCA	NCA	0.004	0.004	ND	ND	ND	ND	ND
DIELDRIN	0.03	0.11	0.04	0.1	ND	ND	ND	ND	ND
ENDOSULFAN SULFATE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
ENDRIN	18	180	2	6	ND	ND	ND	ND	ND
ENDRIN ALDEHYDE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
ENDRIN KETONE	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
GAMMA BHC (LINDANE)	0.52	2.1	0.07	0.07	ND	ND	ND	ND	ND
GAMMA-CHLORDANE	1.6	6.5	2	16	ND	ND	ND	ND	0.018
HEPTACHLOR	0.11	0.38	0.1	0.7	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.053	0.19	0.07	0.6	ND	ND	ND	ND	0.028
METHOXYCHLOR	310	3100	39	630	ND	ND	ND	ND	ND
P,P'-DDD	2	7.2	3	3	ND	ND	ND	ND	ND
P,P'-DDE	1.4	5.1	2	4	ND	ND	ND	ND	0.011
P,P'-DDT	1.7	7	2	12	ND	ND	ND	ND	ND
TOXAPHENE	0.44	1.6	0.6	1	ND	ND	ND	ND	ND
Polychlorinated Biphenyls by Method SW8082									
AROCLOR 1016	3.9	21	5	18	ND	ND	ND	ND	ND
AROCLOR 1221	0.14	0.54	0.3	0.5	ND	ND	ND	ND	ND
AROCLOR 1232	0.14	0.54	0.3	0.5	ND	ND	ND	ND	ND
AROCLOR 1242	0.22	0.74	0.3	3	ND	ND	ND	ND	ND
AROCLOR 1248	0.22	0.74	0.3	3	ND	ND	ND	ND	ND
AROCLOR 1254	0.22	0.74	0.3	3	ND	ND	ND	ND	ND
AROCLOR 1260	0.22	0.74	0.3	3	ND	ND	ND	ND	ND

Notes:
mg/kg - milligrams per kilogram
NCA - No Criteria Available
ND - Not Detected
P - The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported by the laboratory.
DNREC URS CWRA - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health in a Critical Water Resource Area

Table 5
Summary of Soil Analytical Results - Metals
Procino Plating (DE-0344)
Blades, Delaware

Sample					PPMW-03 D	PPMW-06 D	PPSB-01 S	PPSB-04 D	PPSB-05 S
Sample Date					5/24/2011	5/25/2011	5/24/2011	5/26/2011	5/25/2011
Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Chemical Name	EPA RSL Residential (mg/kg)	EPA RSL Industrial (mg/kg)	DNREC URS CWRA Unrestricted Use (mg/kg)	DNREC URS CWRA Restricted Use (mg/kg)					
Metals by Method C200.7									
ALUMINUM	77000	990000	7800	200000	4070	2750	5050	6110	2480
ANTIMONY	31	410	3	27	ND	ND	ND	ND	ND
ARSENIC	0.39	1.6	11*	11*	ND	ND	ND	ND	ND
BARIUM	15000	190000	550	14000	ND	ND	ND	ND	ND
BERYLLIUM	160	2000	16	410	ND	ND	ND	ND	ND
CADMIUM	70	800	4	38	ND	ND	ND	ND	ND
CALCIUM	NCA	NCA	NCA	NCA	291	ND	2590	438	609
CHROMIUM, TOTAL	NCA	NCA	12000	310000	3.1	14.1	2.8	5.1	2.6
COBALT	23	300	22	22	ND	ND	ND	ND	ND
COPPER	3100	41000	310	8200	ND	2.2	1.5	1.4	8.7
IRON	55000	720000	2300	61000	2630	2010	3030	4410	1880
LEAD	400	800	400	1000	1.8	1.8	5.8	2.9	10.0
MAGNESIUM	NCA	NCA	NCA	NCA	ND	ND	273	328	ND
MANGANESE	1800	23000	160	4100	14.4	13.8	22.0	22.0	39.9
NICKEL	1500	20000	160	650	ND	ND	ND	ND	ND
POTASSIUM	NCA	NCA	NCA	NCA	ND	ND	ND	243	ND
SELENIUM	390	5100	26	26	ND	ND	ND	ND	ND
SILVER	390	5100	39	84	ND	ND	ND	ND	ND
SODIUM	NCA	NCA	NCA	NCA	ND	ND	ND	ND	ND
THALLIUM	0.78	10	14	14	ND	ND	ND	ND	ND
VANADIUM	NCA	NCA	55	1400	ND	ND	ND	ND	ND
ZINC	23000	310000	2300	2300	4.5	3.7	7.1	6.6	14.6
Mercury by Method C245.5									
MERCURY	10	43	10	10	ND	ND	ND	ND	ND
Cyanaide by Method SW9012A									
CYANIDE	1600	20000	160	200	ND	ND	ND	ND	ND

Notes:
mg/kg - milligrams per kilogram
* Delaware Background Concentration
NCA - No Criteria Available
ND - Not Detected
DNREC URS CWRA - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health in a Critical Water Resource Area
Shaded - Concentration exceeds DNREC URS CWRA for Unrestricted Use

Table 6
Summary of Groundwater Analytical Results - VOCs
Procino Plating (DE-0344)
Blades, Delaware

Location				PPMW-01		PPMW-02	PPMW-03	PPMW-04	PPMW-05	PPMW-06
Sample				DUP1	PPMW01	PPMW02	PPMW03	PPMW04	PPMW05	PPMW06
Sample Date				6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/17/2011	6/17/2011
Unit				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Chemical	EPA MCL (ug/l)	EPA RSL Tapwater (ug/l)	DNREC URS Groundwater (ug/l)							
Volatile Organic Compounds by Method SW8260										
1,1,1-TRICHLOROETHANE	200	9100	200	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	NCA	0.067	0.05	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	NCA	59000	5900	ND	ND	ND	ND	ND	ND	ND
1,1,2-TRICHLOROETHANE	5	0.24	0.2	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHANE	NCA	2.4	81	ND	ND	ND	ND	ND	ND	ND
1,1-DICHLOROETHENE	7	340	0.04	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	70	2.3	70	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.2	0.00032	0.05	ND	ND	ND	ND	ND	ND	ND
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.05	0.0065	0.001	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	600	370	64	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROETHANE	5	0.15	0.1	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROPROPANE	5	0.39	0.2	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	NCA	NCA	0.5	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	75	0.43	0.4	ND	ND	ND	ND	ND	ND	ND
2-HEXANONE	NCA	47	150	ND	ND	ND	ND	ND	ND	ND
ACETONE	NCA	22000	61	ND	ND	ND	ND	ND	ND	ND
BENZENE	5	0.41	0.4	ND	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	NCA	0.12	0.2	ND	ND	ND	ND	ND	ND	ND
BROMOFORM	NCA	8.5	8	ND	ND	ND	ND	ND	ND	ND
BROMOMETHANE	NCA	8.7	9	ND	ND	ND	ND	ND	ND	ND
CARBON DISULFIDE	NCA	1000	100	ND	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	5	0.44	2	ND	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	100	91	11	ND	ND	ND	ND	ND	ND	ND
CHLOROETHANE	NCA	21000	4	ND	ND	ND	ND	ND	ND	ND
CHLOROFORM	NCA	0.19	0.1	ND	ND	ND	ND	ND	ND	0.9 J
CHLOROMETHANE	NCA	190	2	ND	ND	ND	ND	ND	ND	ND
CIS-1,2-DICHLOROETHENE	70	73	61	ND	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	NCA	NCA	0.08	ND	ND	ND	ND	ND	ND	ND
CYCLOHEXANE	NCA	13000	18000	ND	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	NCA	0.15	0.1	ND	ND	ND	ND	ND	ND	ND
DICHLORODIFLUOROMETHANE	NCA	200	350	ND	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	700	1.5	700	ND	ND	ND	ND	ND	0.4 J	ND
ISOPROPYLBENZENE (CUMENE)	NCA	680	66	ND	ND	ND	ND	0.4 J	ND	ND
M,P-XYLENE (SUM OF ISOMERS)	NCA	NCA	1200	ND	ND	ND	ND	ND	ND	ND
METHYL ACETATE	NCA	37000	610	ND	ND	ND	ND	ND	ND	ND
METHYL ETHYL KETONE (2-BUTANONE)	NCA	7100	190	ND	ND	ND	ND	ND	ND	ND
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	NCA	2000	14	ND	ND	ND	ND	ND	ND	ND
Methyl tert-Butyl Ether (MTBE)	NCA	12	20	ND	ND	ND	ND	ND	ND	ND
METHYLCYCLOHEXANE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	5	4.8	4	ND	ND	ND	ND	ND	ND	ND
O-XYLENE (1,2-DIMETHYLBENZENE)	NCA	200	1200	ND	ND	ND	ND	ND	ND	ND
STYRENE	100	1600	100	ND	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE	5	0.11	1	ND	ND	ND	ND	ND	ND	ND
TOLUENE	1000	2300	750	ND	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	100	110	100	ND	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	NCA	NCA	0.08	ND	ND	ND	ND	ND	ND	ND
TRICHLOROETHENE	5	2	2	ND	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	NCA	1300	1300	ND	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	2	0.016	0.02	ND	ND	ND	ND	ND	ND	ND
XYLENES, TOTAL	10000	200	1200	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/l - micrograms per liter
NCA - No Criteria Available
ND - Not Detected
J - Estimated Concentration
DNREC URS Groundwater - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health
Shaded - Concentration exceeds DNREC Groundwater URS
Underline - Concentrations exceeds EPA Regional Screening Level for Tapwater

Table 7
Summary of Groundwater Analytical Results - SVOCs
Procino Plating (DE-0344)
Blades, Delaware

Location				PPMW-01		PPMW-02	PPMW-03	PPMW-04	PPMW-05	PPMW-06
Sample				DUP1	PPMW01	PPMW02	PPMW03	PPMW04	PPMW05	PPMW06
Sample Date				6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/17/2011	6/17/2011
Unit				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Chemical	EPA MCL (ug/l)	EPA RSL Tapwater (ug/l)	DNREC URS Groundwater (ug/l)							
Semivolatile Organic Compounds by Method SW8270										
1,1-BIPHENYL	NCA	0.83	30	ND	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	70	2.3	70	ND	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	600	370	64	ND	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	NCA	NCA	0.5	ND	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	75	0.43	0.4	ND	ND	ND	ND	ND	ND	ND
2,4,5-TRICHLOROPHENOL	NCA	3700	370	ND	ND	ND	ND	ND	ND	ND
2,4,6-TRICHLOROPHENOL	NCA	6.1	6	ND	ND	ND	ND	ND	ND	ND
2,4-DICHLOROPHENOL	NCA	110	20	ND	ND	ND	ND	ND	ND	ND
2,4-DIMETHYLPHENOL	NCA	730	73	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROPHENOL	NCA	73	7	ND	ND	ND	ND	ND	ND	ND
2,4-DINITROTOLUENE	NCA	0.22	7	ND	ND	ND	ND	ND	ND	ND
2,6-DINITROTOLUENE	NCA	37	4	ND	ND	ND	ND	ND	ND	ND
2-CHLORONAPHTHALENE	NCA	2900	49	ND	ND	ND	ND	ND	ND	ND
2-CHLOROPHENOL	NCA	180	30	ND	ND	ND	ND	ND	ND	ND
2-METHYLNAPHTHALENE	NCA	150	12	ND	ND	ND	ND	ND	ND	ND
2-METHYLPHENOL (O-CRESOL)	NCA	1800	180	ND	ND	ND	ND	ND	ND	ND
2-NITROANILINE	NCA	370	0.2	ND	ND	ND	ND	ND	ND	ND
2-NITROPHENOL	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
3,3'-DICHLOROBENZIDINE	NCA	0.15	0.2	ND	ND	ND	ND	ND	ND	ND
3-NITROANILINE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
4,6-DINITRO-2-METHYLPHENOL	NCA	2.9	0.4	ND	ND	ND	ND	ND	ND	ND
4-BROMOPHENYL PHENYL ETHER	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
4-CHLORO-3-METHYLPHENOL	NCA	3700	NCA	ND	ND	ND	ND	ND	ND	ND
4-CHLOROANILINE	NCA	0.34	15	ND	ND	ND	ND	ND	ND	ND
4-CHLOROPHENYL PHENYL ETHER	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
4-METHYLPHENOL (P-CRESOL)	NCA	180	18	ND	ND	ND	ND	ND	ND	ND
4-NITROANILINE	NCA	3.4	NCA	ND	ND	ND	ND	ND	ND	ND
4-NITROPHENOL	NCA	NCA	60	ND	ND	ND	ND	ND	ND	ND
ACENAPHTHENE	NCA	2200	37	ND	ND	ND	ND	ND	ND	ND
ACENAPHTHYLENE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
ACETOPHENONE	NCA	3700	0.004	ND	ND	ND	ND	ND	ND	ND
ANTHRACENE	NCA	11000	180	ND	ND	ND	ND	ND	ND	ND
ATRAZINE	3	0.29	0.3	ND	ND	ND	ND	ND	ND	ND
BENZALDEHYDE	NCA	3700	370	ND	ND	ND	ND	ND	ND	ND
BENZO(A)ANTHRACENE	NCA	0.029	0.09	ND	ND	ND	ND	ND	ND	ND
BENZO(A)PYRENE	0.2	0.0029	0.01	ND	ND	ND	ND	ND	ND	ND
BENZO(B)FLUORANTHENE	NCA	0.029	0.09	ND	ND	ND	ND	ND	ND	ND
BENZO(G,H,I)PERYLENE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
BENZO(K)FLUORANTHENE	NCA	0.29	0.9	ND	ND	ND	ND	ND	ND	ND
BIS(2-CHLOROETHOXY) METHANE	NCA	110	NCA	ND	ND	ND	ND	ND	ND	ND
BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NCA	0.012	0.01	ND	ND	ND	ND	ND	ND	ND
BIS(2-CHLOROISOPROPYL) ETHER	NCA	0.32	0.3	ND	ND	ND	ND	ND	ND	ND
BIS(2-ETHYLHEXYL) PHTHALATE	6	4.8	5	ND	ND	ND	ND	ND	1 J	ND
BUTYL BENZYL PHTHALATE	NCA	35	730	ND	ND	ND	ND	ND	ND	ND
CAPROLACTAM	NCA	18000	1800	ND	ND	ND	ND	ND	ND	ND
CARBAZOLE	NCA	NCA	3	ND	ND	ND	ND	ND	ND	ND
CHRYSENE	NCA	2.9	9	ND	ND	ND	ND	ND	ND	ND
DIBENZ(A,H)ANTHRACENE	NCA	0.0029	0.01	ND	ND	ND	ND	ND	ND	ND
DIBENZOFURAN	NCA	37	2	ND	ND	ND	ND	ND	ND	ND
DIETHYL PHTHALATE	NCA	29000	5000	ND	ND	ND	ND	ND	ND	ND
DIMETHYL PHTHALATE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
DI-N-BUTYL PHTHALATE	NCA	3700	NCA	ND	ND	ND	ND	ND	ND	ND
DI-N-OCTYLPHTHALATE	NCA	NCA	73	ND	ND	ND	ND	ND	ND	ND
FLUORANTHENE	NCA	1500	150	ND	ND	ND	ND	ND	ND	ND
FLUORENE	NCA	1500	24	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBENZENE	1	0.042	0.04	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROBUTADIENE	NCA	0.86	0.9	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROCYCLOPENTADIENE	50	220	26	ND	ND	ND	ND	ND	ND	ND
HEXACHLOROETHANE	NCA	4.8	1	ND	ND	ND	ND	ND	ND	ND
INDENO(1,2,3-C,D)PYRENE	NCA	0.029	0.09	ND	ND	ND	ND	ND	ND	ND
ISOPHORONE	NCA	71	71	ND	ND	ND	ND	ND	ND	ND
NAPHTHALENE	NCA	0.14	0.7	ND	ND	ND	ND	ND	ND	ND
NITROBENZENE	NCA	0.12	0.4	ND	ND	ND	ND	ND	ND	ND
N-NITROSODI-N-PROPYLAMINE	NCA	0.0096	0.01	ND	ND	ND	ND	ND	ND	ND
N-NITROSODIPHENYLAMINE	NCA	14	14	ND	ND	ND	ND	ND	ND	ND
PENTACHLOROPHENOL	1	0.17	0.6	ND	ND	ND	ND	ND	ND	ND
PHENANTHRENE	NCA	NCA	120	ND	ND	ND	ND	ND	ND	ND
PHENOL	NCA	11000	4000	ND	ND	ND	ND	ND	ND	ND
PYRENE	NCA	1100	18	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/l - micrograms per liter
NCA - No Criteria Available
ND - Not Detected
J - Estimated Concentration
DNREC URS Groundwater - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health

Table 8
Summary of Groundwater Analytical Results - Pesticides and PCBs
Procino Plating (DE-0344)
Blades, Delaware

Location				PPMW-01		PPMW-02	PPMW-03	PPMW-04	PPMW-05	PPMW-06
Sample				DUP1	PPMW01	PPMW02	PPMW03	PPMW04	PPMW05	PPMW06
Sample Date				6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/17/2011	6/17/2011
Unit				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Chemical	EPA MCL (ug/l)	EPA RSL Tapwater (ug/l)	DNREC URS Groundwater (ug/l)							
Pesticides by Methos SW8081										
ALDRIN	NCA	0.004	0.004	ND	ND	ND	ND	ND	ND	ND
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	NCA	0.011	0.01	ND	ND	ND	ND	ND	ND	ND
ALPHA ENDOSULFAN	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
ALPHA-CHLORDANE	NCA	NCA	NCA	ND	ND	ND	0.11 P	ND	ND	ND
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	NCA	0.037	0.04	ND	ND	ND	ND	ND	ND	ND
BETA ENDOSULFAN	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	NCA	NCA	0.04	ND	ND	ND	ND	ND	ND	ND
DIELDRIN	NCA	0.0042	0.004	0.14	ND	ND	1.2	ND	0.62	ND
ENDOSULFAN SULFATE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
ENDRIN	2	11	2	ND	ND	ND	ND	ND	ND	ND
ENDRIN ALDEHYDE	NCA	NCA	NCA	ND	ND	ND	ND	ND	ND	ND
ENDRIN KETONE	NCA	NCA	NCA	ND	ND	ND	0.047 J	ND	0.058	ND
GAMMA BHC (LINDANE)	0.2	0.061	0.05	ND	ND	ND	ND	ND	ND	ND
GAMMA-CHLORDANE	2	0.19	0.2	ND	ND	ND	0.034 Jp	ND	ND	ND
HEPTACHLOR	0.4	0.015	0.01	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	0.2	0.0074	0.007	ND	ND	ND	0.055 P	ND	ND	ND
METHOXYCHLOR	40	180	40	ND	ND	ND	ND	ND	ND	ND
P,P'-DDD	NCA	0.28	0.3	ND	ND	ND	ND	ND	ND	ND
P,P'-DDE	NCA	0.2	0.2	ND	ND	ND	ND	ND	ND	ND
P,P'-DDT	NCA	0.2	0.2	ND	ND	ND	ND	ND	ND	ND
TOXAPHENE	3	0.061	0.06	ND	ND	ND	ND	ND	ND	ND
Polychlorinated Biphenyls by Method SW8082										
AROCLOR 1016	NCA	0.96	0.10	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1221	NCA	0.0068	0.03	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1232	NCA	0.0068	0.03	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1242	NCA	0.034	0.03	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1248	NCA	0.034	0.03	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1254	NCA	0.034	0.03	ND	ND	ND	ND	ND	ND	ND
AROCLOR 1260	NCA	0.034	0.03	ND	ND	ND	ND	ND	ND	ND

Notes:
ug/l - micrograms per liter
NCA - No Criteria Available
ND - Not Detected
J - Estimated Concentration
P - the %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported by the laboratory.
DNREC URS Groundwater - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health
Shaded - Concentration exceeds DNREC Groundwater URS
Underline - Concentrations exceeds EPA Regional Screening Level for Tapwater

Table 9
Summary of Groundwater Analytical Results - Metals
Procino Plating (DE-0344)
Blades, Delaware

Location				PPMW-01				PPMW-02		PPMW-03		PPMW-04		PPMW-05		PPMW-06	
Sample				DUP1	DUP1	PPMW01	PPMW01	PPMW02	PPMW02	PPMW03	PPMW03	PPMW04	PPMW04	PPMW05	PPMW05	PPMW06	PPMW06
Total (T) or Dissolved (D)				D	T	D	T	D	T	D	T	D	T	D	T	D	T
Sample Date				6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/16/2011	6/17/2011	6/17/2011	6/17/2011	6/17/2011
Unit				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Chemical	EPA MCL (ug/l)	EPA RSL Tapwater (ug/l)	DNREC URS Groundwater (ug/l)														
Metals by Method C200.7																	
ALUMINUM	NCA	37000	200	ND	841	ND	722	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ANTIMONY	6	15	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ARSENIC	10	0.045	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BARIUM	2000	7300	260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BERYLLIUM	4	73	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CADMIUM	5	18	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CALCIUM	NCA	NCA	NCA	10100	10800	10200 EW	9760 EW	21600 EW	21100 EW	12800	13100	23800 EW	23500 EW	20500	22000	12500	13300
CHROMIUM, TOTAL	100	NCA	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**959**	**1030**
COBALT	NCA	11	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
COPPER	1300	1500	1300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IRON	NCA	26000	300	ND	455	ND	337	ND	ND	ND	ND	ND	ND	745	892	167	217
LEAD	15	NCA	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MAGNESIUM	NCA	NCA	NCA	1810	1960	1820 EW	1790 EW	3770 EW	3670 EW	2420	2500	5240 EW	5160 EW	1910	2040	1560	1650
MANGANESE	NCA	880	50	ND	ND	ND	ND	ND	ND	49.3	50.8	ND	ND	53.0	56.8	58.8	62.6
NICKEL	NCA	730	100	47.5	48.3	47.3 EW	43.5 EW	ND	ND	ND	ND	ND	ND	ND	ND	377	399
POTASSIUM	NCA	NCA	NCA	1660	1760	1660 EW	1610 EW	2700 EW	2650 EW	3600	3610	4420 EW	4170 EW	3360	3480	19100	20200
SELENIUM	50	180	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SILVER	NCA	180	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SODIUM	NCA	NCA	NCA	4420	4490	4260	4260	6240	6240	8020	8410	13600 EW	13200 EW	16900	17900	7780	8310
THALLIUM	2	0.37	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
VANADIUM	NCA	NCA	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ZINC	NCA	11000	2000	ND	ND	ND	ND	ND	ND	29.7	30.5	ND	ND	ND	ND	304	321
Mercury by Method C245.1																	
MERCURY	2	0.63	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyanide by Method E335.4																	
CYANIDE	200	730	200	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND	NA	ND

Notes:
ug/l - micrograms per liter
NCA - No Criteria Available
NA - Not Analyzed
ND - Not Detected
EW - Value exceeds a theoretically equal or greater value (e.g., dissolved > total), however, the difference is within the expected precision of the analytical techniques and is not statistically significant.
DNREC URS Groundwater - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health
Shaded - Concentration exceeds DNREC Groundwater URS
Bold - Concentration exceeds EPA Maximum Contaminant Level for drinking water

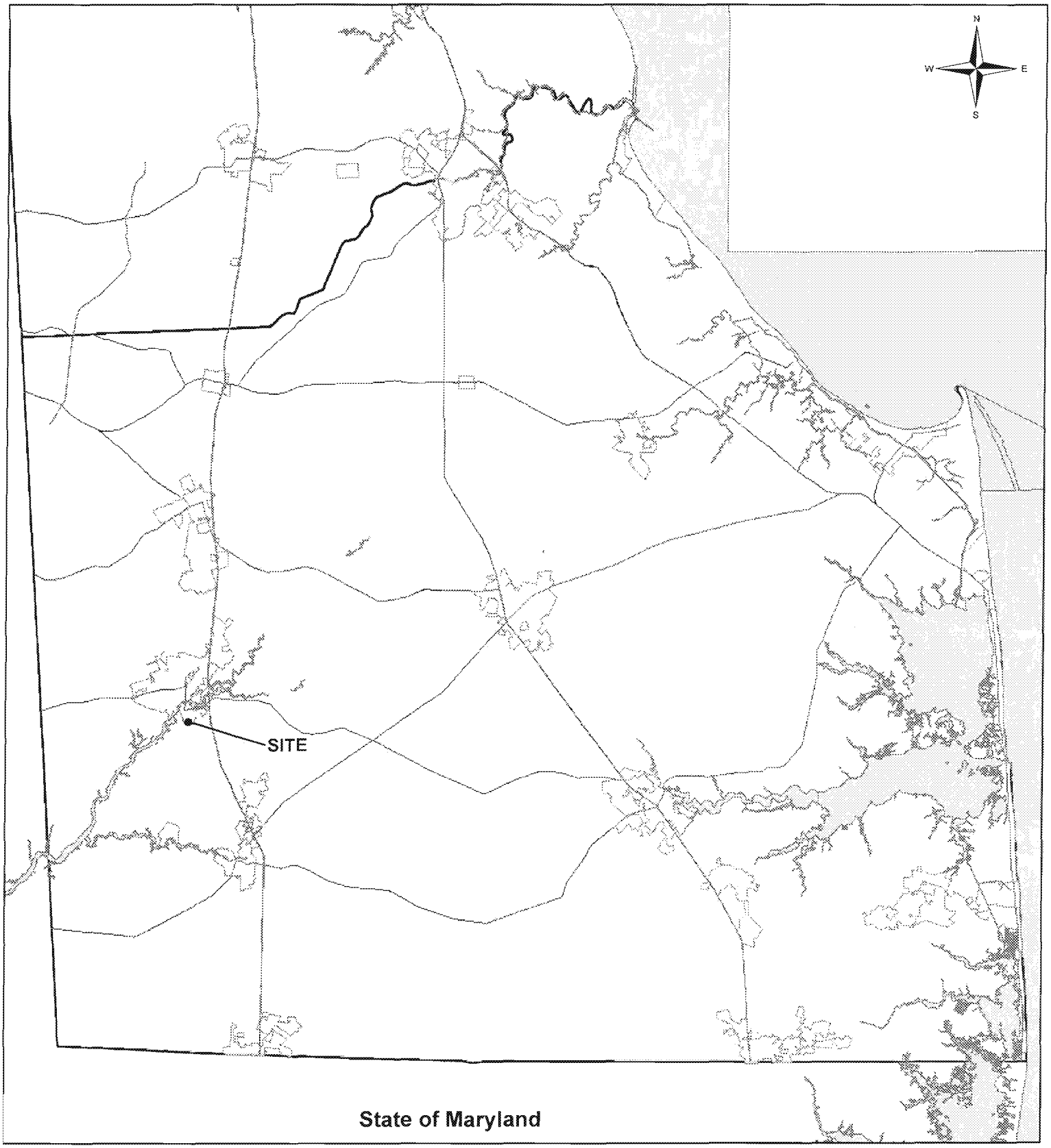
Table 10
Summary of Private Well Analytical Results
Procino Plating (DE-0344)
Blades, Delaware

Location - Numbers Correspond to Figure 1:				1		2	3	4	5	6		7	8	9	10	11		12	13	14	15	16	17	18	19	20
Address						Shares well with #1			Vacant					Vacant Property	Empty Lo			Not Sampled			Not Sampled	Vacant Property			
Sample Date				5/19/2010	######	######	######	4/28/2011	4/28/2011	5/19/2010	4/28/2011	4/28/2011	4/28/2011	4/28/2011	4/28/2011	######	######	4/28/2011	4/28/2011	4/28/2011	4/28/2011	4/28/2011	4/28/2011	4/28/2011	4/28/2011	5/19/2010
Unit				ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Chemical	EPA MCL (ug/l)	EPA SDWR Secondary MCL (ug/l)	DNREC URS Groundwater (ug/l)																							
Trace Metals by Method 200.8																										
ANTTIMONY	6	15	6	ND	ND	NS	ND	ND	NS	ND	ND	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
ARSENIC	10	0.045	0.50	ND	ND	NS	ND	ND	NS	ND	ND	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
BARIUM	2000	7300	260	241.7	274.5	NS	525	64.2	NS	769.2	847.8	422.1	76.7	NS	NS	131.6	136.1	NS	83.2	228.9	NS	NS	231.4	ND	29.8	401.5
BERYLLIUM	4	73	4	0.7	1.7	NS	0.5	ND	NS	4.0	3.8	0.8	0.7	NS	NS	ND	ND	NS	ND	ND	NS	NS	0.5	ND	ND	0.8
CADMIUM	5	18	5	1.6	ND	NS	ND	ND	NS	0.5	0.5	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
CHROMIUM	100	NCA	100	3.1	2.3	NS	1.3	3.1	NS	2.3	1.6	1.4	24.2	NS	NS	3.8	2.9	NS	4.0	1.2	NS	NS	3.5	3.3	3.1	2.8
LEAD	15	NCA	15	3.2	1.8	NS	0.6	3.8	NS	0.9	1.0	0.6	1.9	NS	NS	ND	ND	NS	ND	2.9	NS	NS	2.1	ND	ND	2.7
MANGANESE	50*	880	50	**146.9**	**82.3**	NS	**97.7**	5.7	NS	**169.9**	**190.6**	**202.3**	**93.0**	NS	NS	**172.3**	**217.9**	NS	37.6	40.8	NS	NS	**165.3**	1.1	13.6	**237.8**
NICKEL	NCA	730	100	5.9	7.1	NS	4.6	0.6	NS	10.9	11.2	6.1	76.5	NS	NS	2.0	2.0	NS	1.7	2.5	NS	NS	5.1	ND	1.7	13.4
MERCURY	2	11	2	ND	ND	NS	ND	ND	NS	ND	ND	ND	1.0	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
SELENIUM	50	180	50	ND	ND	NS	ND	ND	NS	ND	ND	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
THALLIUM	2	0.37	2	ND	ND	NS	ND	ND	NS	ND	ND	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
URANIUM	30	110	11	ND	ND	NS	ND	ND	NS	ND	ND	ND	ND	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
ZINC	5000*	11000	2000	**6950**	364.6	NS	42.2	ND	NS	1360	1426.5	23.3	17.2	NS	NS	21.1	24.9	NS	ND	30.3	NS	NS	46.4	ND	ND	35.7
Cyanide by Method E335.4																										
CYANIDE	200	730	200	ND	ND	NS	ND	ND	NS	ND	ND	ND	20	NS	NS	ND	ND	NS	ND	ND	NS	NS	ND	ND	ND	ND
Volatile Organic Compounds by Method 524.2																										
VOCs	--	--	--	ND	NA	NS	NA	NA	NS	ND	NA	NA	NA	NS	NS	ND	NA	NS	NA	NA	NS	NS	NA	NA	NA	ND

Notes:
ug/l - micrograms per liter
NCA - No Criteria Available
NA - Not Analyzed
NS - Not Sampled
ND - Not Detected
* - EPA Secondary MCL
DNREC URS Groundwater - DNREC Uniform Risk Based Remediation Standard for Protection of Human Health
Shaded - Concentration exceeds DNREC Groundwater URS
Bold - Concentration exceeds EPA MCL or Secondary MCL

FIGURES

Procino Plating DE-0344



0 2 4 6 8 Miles

1:300,000

1 inch = 25,000 feet

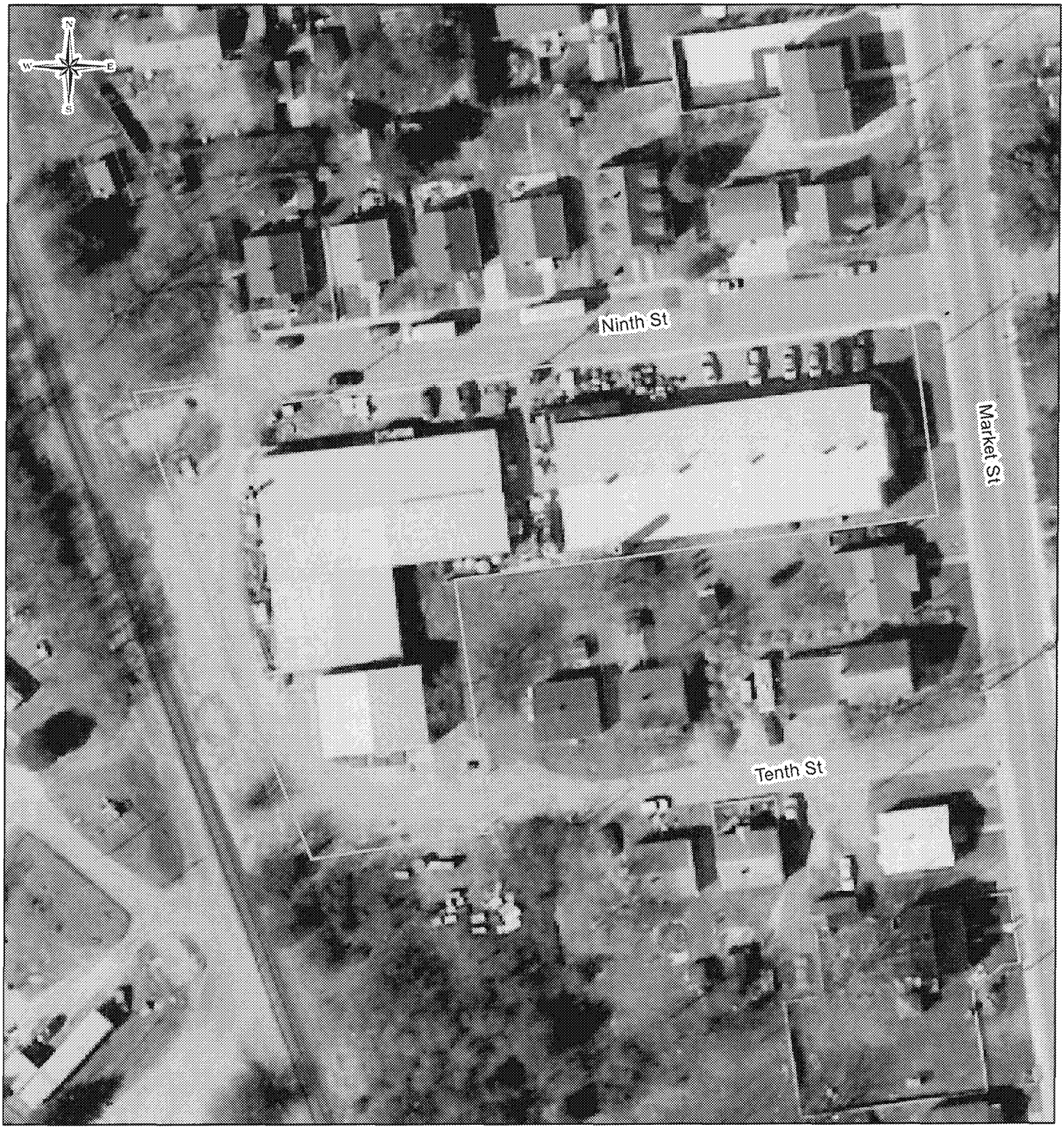
WHS
Site Invesigation &
Restoration Section
391 Lukens Dr.,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

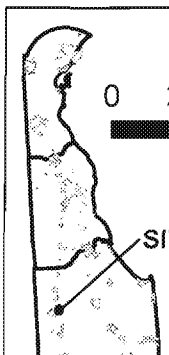
KAD11020

Figure 1
Location of Procino Plating (DE-0344) in Sussex County, Delaware

This map is provided by the DNREC-SIRB solely for display and reference purposes and is subject to change without notice. DNREC-SIRB will not be held responsible for the assumed accuracy contained in the map or for use other than its intended purposes. September 2011



KAD11021



0 25 50 75 100 Feet

1:800

1 in = 67 feet

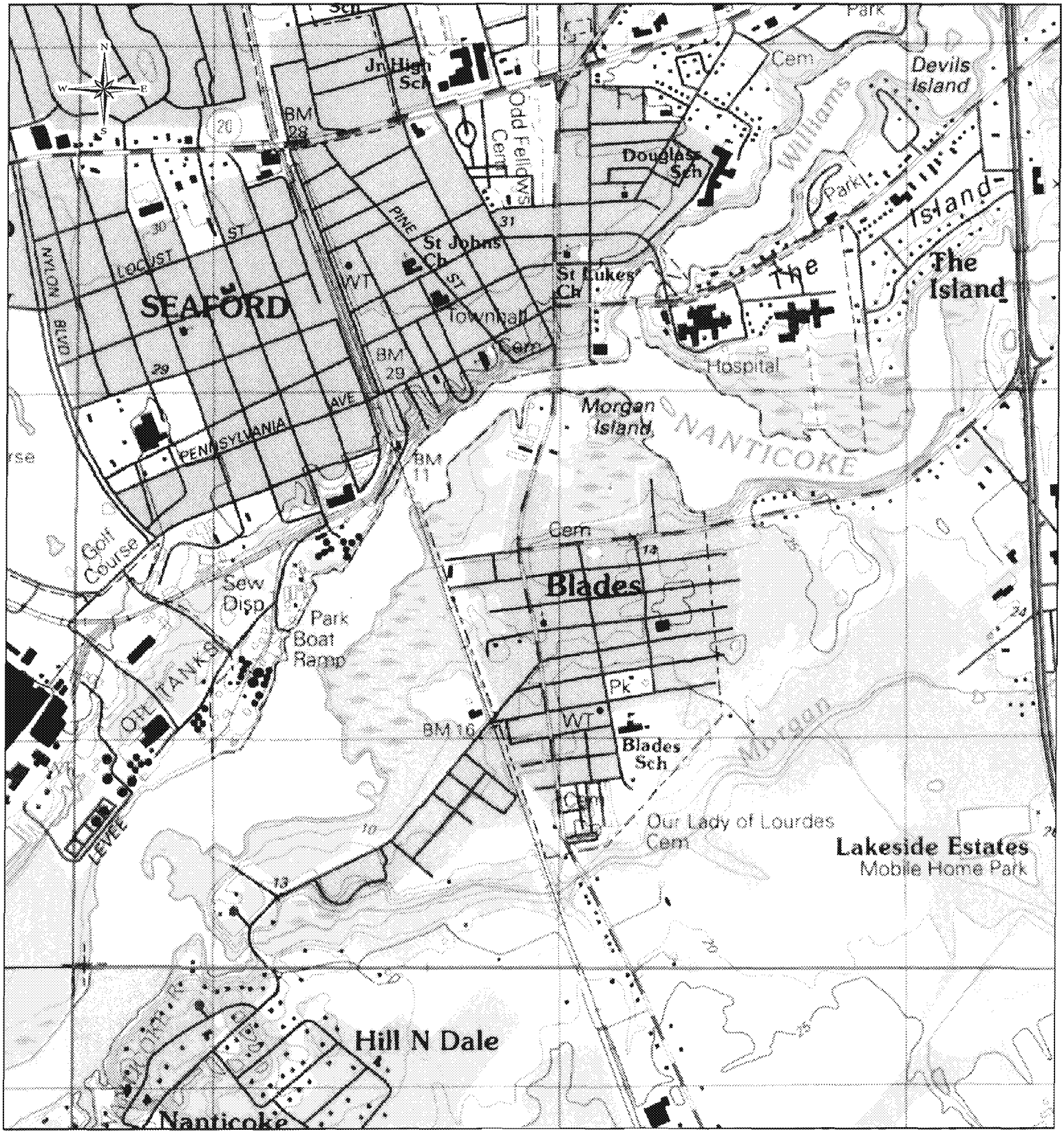
WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 2
Site Features Map
Procino Plating (DE-0344)
Blades, Delaware

This map is provided by the DNREC-SIRB solely for displayand reference purposes and is subject to change withoutnotice. DNREC-SIRB will not be held responsible for the assumed accuracy contained in the map or for use other than it's intended purpose.

September 2011



KDHGIS2011_153

0 0.1 0.2 0.3 Miles

1 in = 1,250 feet

1:15,000

SITE

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 3
USGS 7.5 Minute Topo Map
Procino Plating (DE-0344)

 September 2011

KDHGIS2011_151

0 75 150 225 300 Feet

1 in = 200 feet

1:2,400

SITE

WHS
Site Investigation &
Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

Figure 4
1937 Aerial Photograph
Procino Plating (DE-0344)

0 75 150 225 300 Feet

1 in = 200 feet

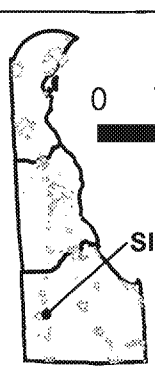
1:2,400

KDHGIS2011_150

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

Figure 5
1954 Aerial Photograph
Procino Plating (DE-0344)

 September 2011



0 75 150 225 300 Feet

1 in = 200 feet

1:2,400

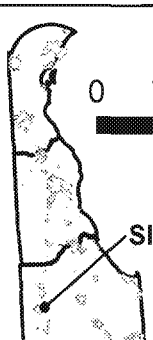
KDHGIS2011_149

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 6
1961 Aerial Photograph
Procino Plating (DE-0344)

September 2011



0 75 150 225 300 Feet

1 in = 200 feet

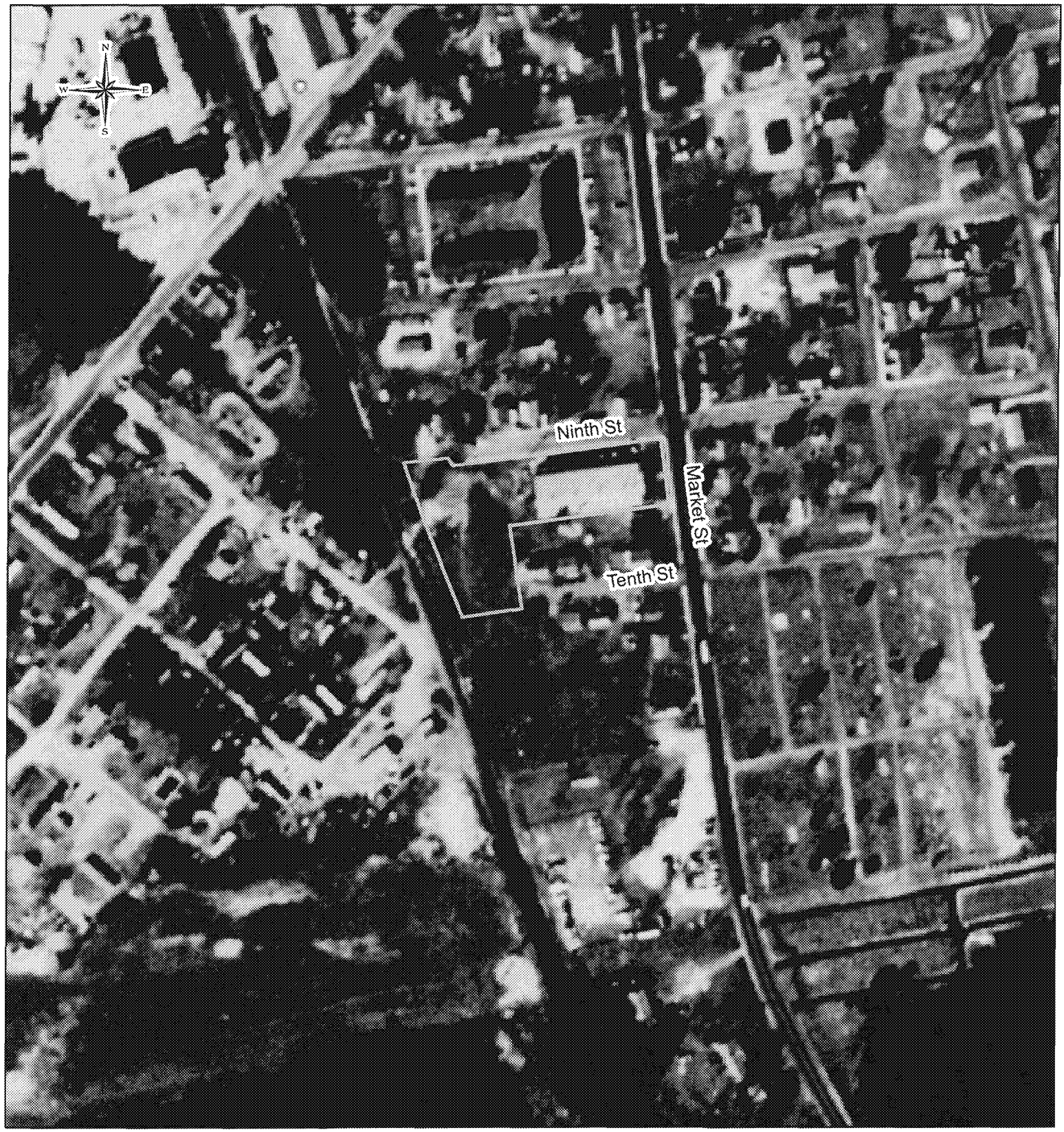
1:2,400

KDHGIS2011_148

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

Figure 7
1968 Aerial Photograph
Procino Plating (DE-0344)

This map is provided by the DNREC-SIRB solely for display and reference purposes and is subject to change without notice. DNREC-SIRB will not be held responsible for the assumed accuracy contained in the map or for use other than it's intended purpose. September 2011



0 75 150 225 300 Feet

1 in = 200 feet

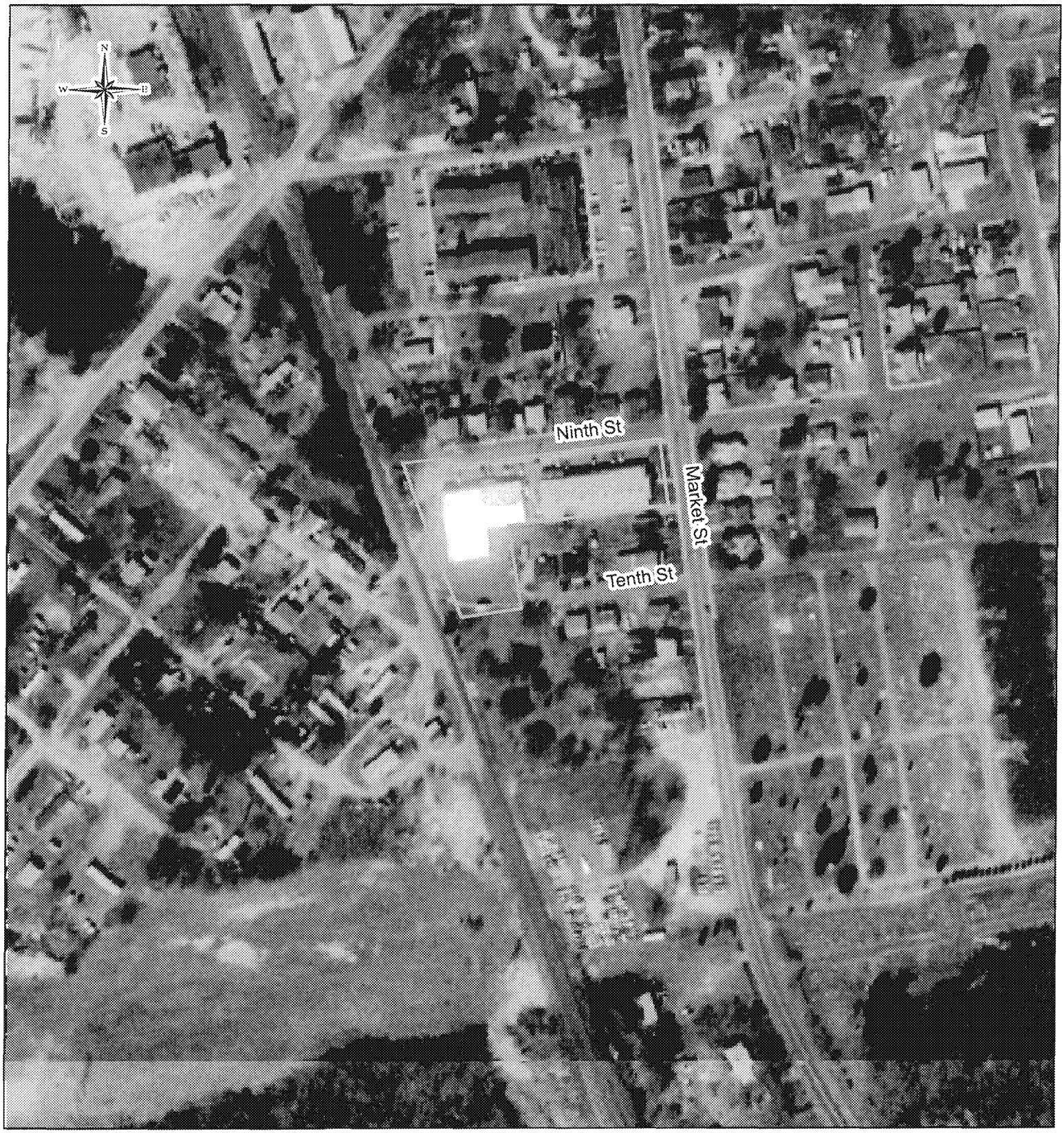
1:2,400

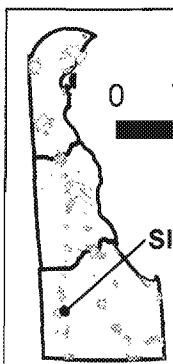
KDHGIS2011_147

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

Figure 8
1992 Aerial Photograph
Procino Plating (DE-0344)

 September 2011





0 75 150 225 300 Feet

1 in = 200 feet

1:2,400

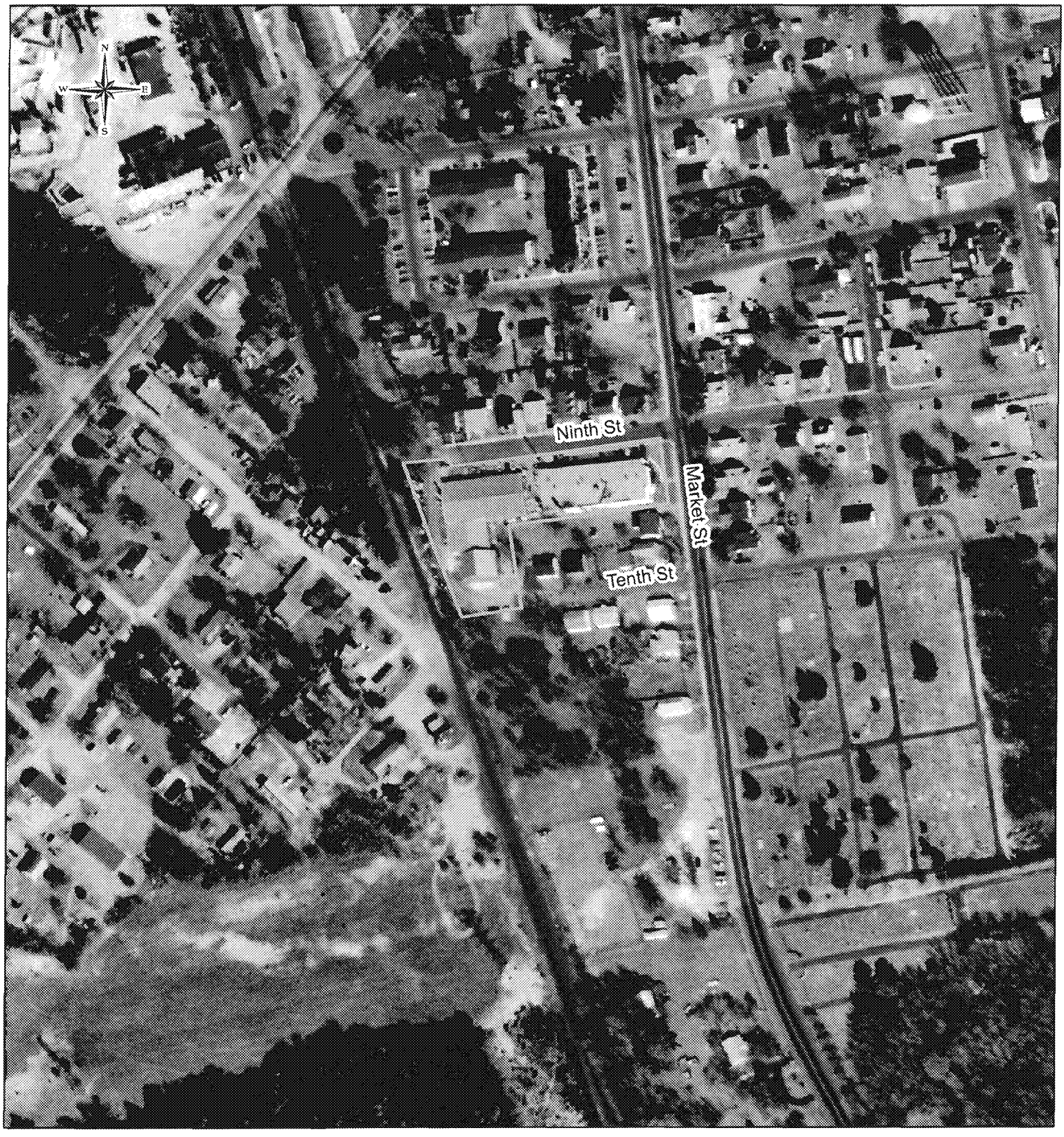
KDHGIS2011_146

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

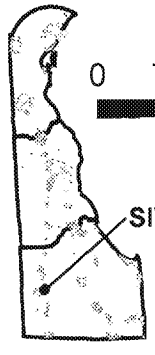
DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 9
1997 Aerial Photograph
Procino Plating (DE-0344)

 September 2011



KDHGIS2011_145



0 75 150 225 300 Feet

1 in = 200 feet

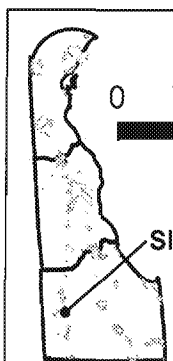
1:2,400

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 10
2002 Aerial Photograph
Procino Plating (DE-0344)

 September 2011



0 75 150 225 300 Feet

1 in = 200 feet

1:2,400

KDHGIS2011_152

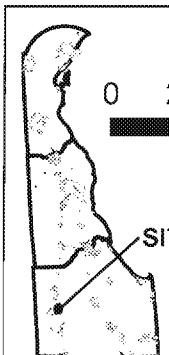
WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 11
2007 Aerial Photograph
Procino Plating (DE-0344)

 September 2011

KAD11022



0 25 50 75 100 Feet

1:800

1 in = 67 feet

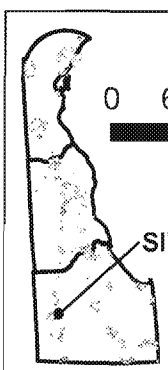
DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

Figure 12
Monitoring Well and Soil Boring Locations
Procino Plating (DE-0344)

September 2011

Ex. 9 Wells & Ex. 6 Personal Privacy



0 60 120 180 240
Feet

1:2,053

1 in = 171 feet

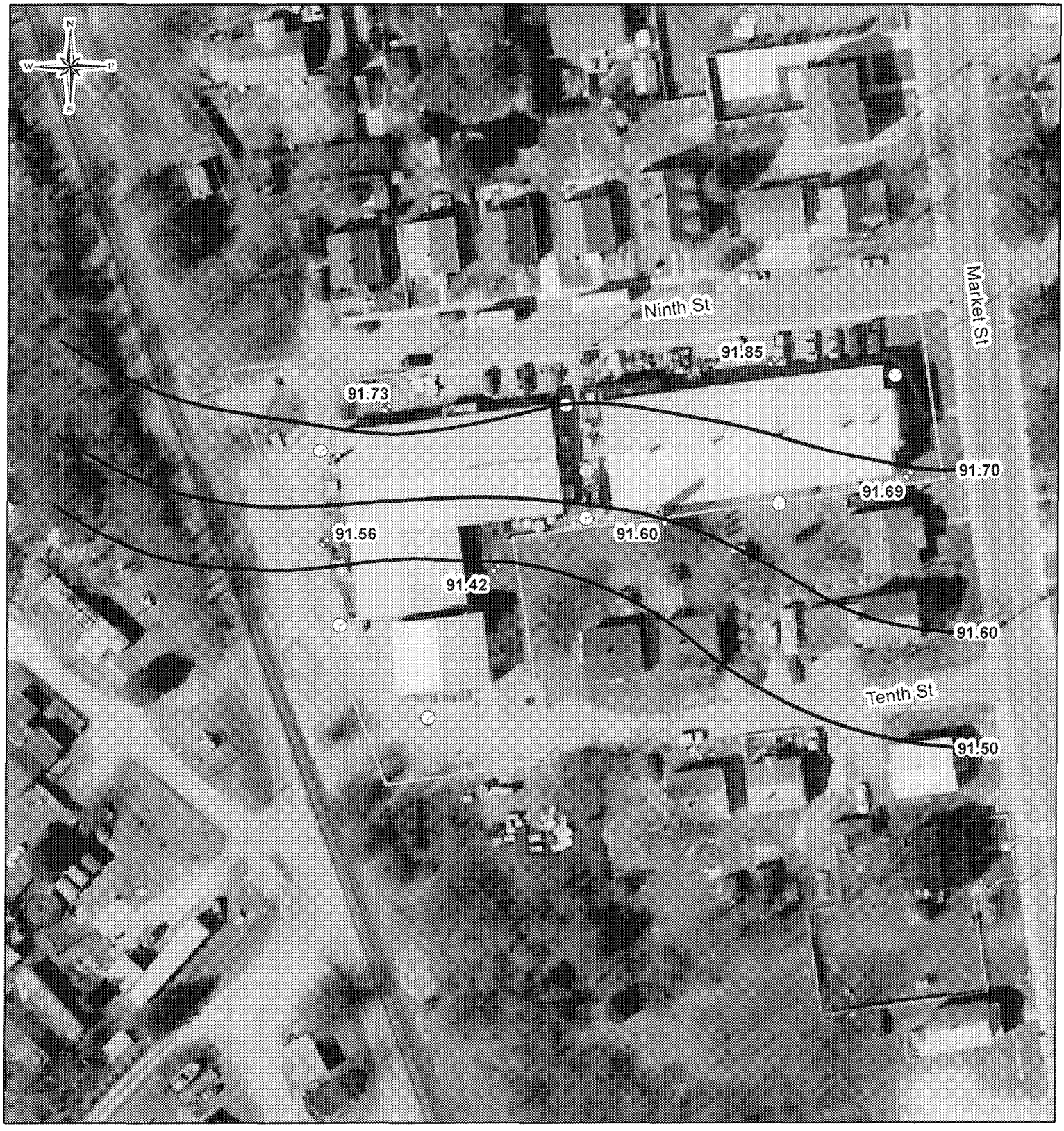
DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

WHS
Site Investigation & Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

KAD11023

Figure 13
Private Well Sampling Locations
Procino Plating (DE-0344)

September 2011



KAD11024

0 25 50 75 100 Feet

SITE

1:900

1 in = 75 feet

WHS
Site Investigation &
Restoration Section
391 Lukens Drive,
New Castle, DE 19720
302.395.2600

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Figure 14
Groundwater Elevation Contour Map - 5/24/11
Procino Plating (DE-0344)

September 2011

APPENDICES

Procino Plating DE-0344

APPENDIX A
PARCEL TITLE SEARCH
Procino Plating DE-0344

Tax Parcel Numbers:
132-1.15-187.00 and 132-1.15-188.00

Purchase Date	Sale Date	Owners
Parcel 132-1.15-187.00		
4/11/2011	-	Four Pros Properties, LLC
5/3/1996	4/11/2011	Patrick and Rita Procino
6/23/1988	5/3/1996	HMS Blades, Limited
-	6/23/1988	Ex. 6 Personal Privacy (PP)
Parcel 132-1.15-188.00		
4/11/2011	-	Four Pros Properties, LLC
7/16/1996	4/11/2011	Ex. 6 Personal Privacy (PP)
-	7/16/1996	

APPENDIX B
SOIL BORING LOGS
Procino Plating DE-0344

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-01	Logger: KAD	Geologist: JGC	Date: 05/24/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PP-SB-01S	Sample Interval 1.2-3.2	Time: 12:50	**Deep Sample:** PP-SB-01D	Sample 8.35-Interval 9.25	Time: 12:55

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	0.8	No Recovery	
PID=0	0.8	1.2	Asphalt crumbles and gravel	Dry
	1.2	1.85	Brown MG Sand	Dry
	1.85	2.35	Dark. Brown to Black FG to MG Sand	Dry
	2.35	5.0	Tan and Light Brown FG to MG Sand, Trace Silt and Trace Organic	Dry
2	5.0	7.3	No Recovery	
PID=0	7.3	8.35	Fallback	Dry
	8.35	9.25	Tan and Brown Mottled FG to MG Sand	Dry
	9.25	10.0	Laminated Tan and Brown FG to MG Sand	Wet

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-02	Logger: JGC/KAD	Geologist: JGC	Date: 05/24/11	Page___of___
Site Name: **Procino Plating**		Weather: Sunny, light breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPSB-02S	Sample Interval 1.15-3.15	Time: 12:15	**Deep** PPSB-02D **Sample:**	Sample Interval 7.6-9.1	Time: 12:20

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	0.7	No Recovery	
PID=0	0.7	1	Asphalt crumbles and gravel	Dry
	1	1.9	Orange and Light Brown Fine Medium Sand – Trace Silt	Dry
	1.9	2.7	Dark Brown and Black FG to MG Sand	Dry
	2.7	5.0	Tan, Light Brown FG to MG Sand, TR. Organic (3.6 -3.9)	Dry
2	5.0	7.2	No Recovery	
PID=0	7.2	7.6	Fallback	Dry
	7.6	9.1	Tan, Light Brown FG to MG Sand, TR. Organic (3.6 -3.9)	Dry
	9.1	10.0	FG Tan and Light Brown Sand	Wet

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-03	Logger: KAD/JGC	Geologist: JGC	Date: 05/24/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, light breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PPSB-03S	Sample 1.15 - Interval 3.15	Time: 10:40	**Deep Sample:** PPSB-03D	Sample 6.9- Interval 8.9	Time: 10:45

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	0.9	No Recovery	
PID=0	0.9	1.25	Gravel and Gray Asphalt	Dry
	1.25	1.6	Tan/Orange Medium Sand with Trace Silt	Dry
	1.6	1.9	Dark Brown to Black Fine to Medium Sand	Dry
	1.9	2.1	Light Brown Fine to Medium Sand with Gravel	Dry
	2.1	2.45	Tan Fine to Medium Sand	Dry
	2.45	2.95	Dark Brown to Black FG to MG Sand	Dry
	2.95	5.0	Light Brown FG to MG Sand, Trace Gravel	Dry
2	5.0	6.1	No Recovery	
PID=0	6.1	6.7	Light Brown FG to MG Sand, Trace Gravel	Dry
	6.7	6.95	Black and Tan MG to CG Sand, Trace Gravel	Dry
	6.95	8.9	Mottled Tan and Light Brown FG to MG Sand	Dry
	8.9	10.0	Mottled Tan and Light Brown FG to MG Sand, Trace Gravel	Wet

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-04	Logger: KAD	Geologist: JGC	Date: 05/26/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PPSB-04S	Sample Interval 1.6-3.6	Time: 09:42	**Deep Sample:** PPSB-04D	Sample Interval 8.0-10.0 Time: 09:46

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	1.1	No Recovery	
PID=0.3@ 1.65' 3.6-hi otherwise PID=0	1.1	1.6	Light and Dark Brown Silty Sand and Gravel	Dry
	1.6	2.5	Mottled Light and Dark Brown Silty FG/MG Sand, Trace Gravel	Dry
	2.5	2.95	Brown Silty FG/MG Sand, Trace Clay	Dry
	2.95	4.0	Mottled Light and Dark Brown FG/MG Sand, Gravel @3.55'	Dry
	4.0	4.15	Orange and Brown FG/MG Sand	Dry
	4.15	4.45	Dark Brown FG/MG Sand	Dry
	4.45	5.0	Mottled Tan and Brown FG/MG Sand	Dry
2	5.0	7.0	No Recovery	
PID=0	7.0	7.3	Fall Back (PID HIT = 0.8)	Dry
	7.3	8.15	Mottled Tan and Brown FG/MG sand	Dry
	8.15	10.0	Laminated Tan and Brown FG/MG Sand (Moist @10')	Dry
3	10.0	11.7	No Recovery	
PID=0	11.7	12.2	Fall Back	
	12.2	15.0	Tan FG/MG sand, TR. Heavy Mineral, Concentration of heavy minerals @ 13.15 – 13.3'	Wet

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-05	Logger: KAD	Geologist: JGC	Date: 05/25/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, lt. breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPSB-05S	Sample Interval 2.2-4.2	Time: 10:29	**Deep Sample:** PPSB-05D	Sample 9-10 & Interval 11.3-12.3	Time: 10:42

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	0.8	No Recovery	
PID=0	2.05	2.2	Grass and Topsoil	Dry
	2.2	2.7	Dark Brown Silty FG/MG Sand	Dry
	2.7	3.15	Light Brown FG/MG Sand	Dry
	3.15	3.4	Light Brown FG/MG Sand with Gravel and Pebbles	Dry
	3.4	3.55	Light Brown FG/MG Sand with Gravel and Pebbles 2.7 – 3.15	Dry
	3.55	3.7	Light to Dark Brown MG/CG Sand and Gravel	Dry
	3.7	4.2	Dark Brown FG/MG Sand	Dry
	4.2	5.0	Light Brown FG/MG Sand	Dry
2	5.0	6.75	No Recovery	
PID=0	6.75	7.15	Fall Back	Dry
	7.15	8.1	Light Brown to Orange FG/MG Sand, Trace Silt	Dry
	8.1	10.0	Laminated Tan and Orange FG/MG Sand with a few heavy mineral laminations	Dry
3	10.0	10.5	No Recovery	
PID=0	10.5	11.3	Fallback (water @11-11.5)	
	11.3	12.1	Laminated Tan and Orange FG/MG Sand	Dry
	12.1	12.65	Light Brown Silty FG/MG Sand	Moist
	12.65	13.7	Tan FG/MG Sand, Silty Sand Lens (12.85-13.0)	Wet
	13.7	13.9	Tan MG/CG Sand	Wet
	13.9	15.0	Tan FG/MG Sand	Wet

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-06	Logger: KAD	Geologist: JGC	Date: 05/25/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, lt. breeze, hot, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPSB-06S	Sample Interval 3.0-5.0	Time: 13:30	**Deep Sample:** PPSB-06D	Sample Interval 8.0-10.0	Time: 13:36

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	2.7	No Recovery	
PID=0	2.7	2.95	Grass and Topsoil	Dry
	2.95	4.5	Light and Dark Brown Silty FG/MG Sand, Roots	Dry
	4.5	5.0	Light Brown FG/MG Sand	Dry
2	5.0	6.9	No Recovery	
PID=0	6.9	7.15	Fallback	
	7.15	7.9	Orangish brown FG/MG Sand	Dry
	7.9	10.0	Laminated Tan and Brown FG/MG Sand, Trace Heavy Minerals	Dry
			Wet at 10'	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPSB-07	Logger: KAD	Geologist: JGC	Date: 05/26/11	Page___of___
Site Name: **Procino Plating**		Weather: Sunny, breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PPSB-07S	Sample Interval 2.9-4.9	Time: 09:12	**Deep** PPSB-07D **Sample:**	Sample 7.6-Interval 9.6	Time: 09:20

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	2.55	No Recovery	
PID=0	2.55	2.9	Dark Brown Silty Sand and Gravel "topsoil"	Dry
	2.9	3.35	Light Brown and Tan Silty MG/CG Sand	Dry
	3.35	4.5	Mottled light and dark Brown FG/MG Sand, TR. Gravel	Dry
	4.5	5.0	Laminated light and dark Brown FG/MG Sand	Dry
2	5.0	6.8	No Recovery	
PID=0	6.8	7.25	Fall Back	Dry
	7.25	8.55	Mottled Light and Dark Brown FG/MG Sand	Dry
	8.55	10.0	Laminated Light and Dark Brown FG/MG Sand Moist @9.6'	Dry
3	10.0	11.1	No Recovery (Wet @ 10')	
PID=0	11.1	11.6	Fallback	
	11.6	14.5	Tan FG/MG Sand, Heavy Mineral Laminations	Wet
	14.5	14.8	Tan FG/CG Sand, Trace Gravel	Wet
	14.8	15.0	Tan FG/MG Sand	Wet
			Duplicate of PPSB-07D is PPSB-40D	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-01	Logger: KAD	Geologist: JGC	Date: 05/24/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, breezy, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPMW-01S	Sample Interval 1.3-3.3	Time: 13:10	**Deep Sample:** PPMW-01D	Sample Interval 7.65 9.3	Time: 13:15

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	1.2	No Recovery	
PID=0	1.2	1.3	Roots and Topsoil	Dry
	1.3	2.95	Dark Brown and Black Silty FG to MG Sand	Dry
	2.95	5.0	Mottled Tan and Light Brown FG to MG Sand, Trace Organics	Dry
2	5.0	7.3	No Recovery	
PID=0	7.3	7.65	Fallback	Dry
	7.65	9.3	Mottled Tan and Brown FG to MG Sand, Trace Organics	Dry
	9.3	10.0	Mostly FG Sand, Mottled Tan and Brown	Wet
3	10.0	13.2	No Recovery	
PID=0	13.2	15.0	Tan MG to CG Sand	Wet
4	15.0	18.6	No Recovery	
PID=0	18.6	19.2	Tan and Light Brown FG to MG Sand	Wet
	19.2	20.0	Tan MG to CG Sand and Quartz Gravel	Wet
			Set Well @ 18'	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-02	Logger: JGC	Geologist: JGC	Date: 05/24/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPMW-02S	Sample Interval 1.3-3.3	Time: 11:00	**Deep** PPMW-02D **Sample:**	Sample 7.2-Interval 9.2	Time: 11:05

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	0.9	No Recovery	
PID=0	0.9	1.2	Asphalt crumbles and gravel	Dry
	1.2	1.7	Tan and Orange Silty Fine – Medium Sand	Dry
	1.7	2.1	Dark Brown Silty Fine Sand	Dry
	2.1	2.65	Tan and Orange Silty Fine to Medium Sand	Dry
	2.65	3.1	Dark Brown Silty Fine Sand	Dry
	3.1	5.0	Light Brown to Tan Fine to Medium Sand	Dry
2	5.0	6.8	No Recovery	
PID=0	6.8	7.0	Light Brown to Tan Fine to Medium Sand	Dry
	7.0	7.15	Dark Brown to Balck Fine to Medium Sand and Trace Gravel	Dry
	7.15	9.2	Mottled Tan and Brown Fine to Medium Sand	Dry
	9.2	10	Tan Fine Sand	Wet
3	10.0	10.2	No Recovery	
PID=0	10.2	12.3	Fine Grained Tan sand with Trace Pebbles	Wet
	12.3	13.0	Medium to Course Grained Tan Sand and Pebbles	Wet
	13.0	13.7	Fine Grained Tan Sand with Trace Pebbles	Wet
	13.7	15	Medium to Course Grained Tan Sand with Trace Pebbles	Wet
4	15	18.4	No Recovery	
PID=0	18.4	18.7	Tan and Orange Medium to Course Sand	Wet
	18.7	18.95	Gray and Orange Clay	Dry
	18.95	19.15	Gray and Orange Medium to Course Sand	Wet
	19.15	20	Gray and Orange Fine to Medium Sand	Wet
			Set Well at 18'	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-03	Logger: MMP	Geologist: JGC	Date: 05/24/11	Page___of___
Site Name: **Procino Plating**		Weather: Sunny, slight breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPMW-03S	Sample Interval 0-5	Time: 09:18	**Deep** PPMW-03D **Sample:**	Sample 7.5-Interval 9.5	Time: 09:25

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	2.2	No Recovery	
PID=0	2.2	4.25	Tan, Light Brown, Fine to Medium Sand, Trace Silt	Dry
	4.25	4.6	Laminate Light to Dark Brown, Fine to Medium Sand, Trace Silt	Dry
	4.6	5.0	Tan, Light Brown, Fine to Medium Sand, Trace Silt	Dry
2	5.0	7.0	No Recovery	
PID=0	7.0	9.5	Laminated/Varying Orange to Tan, Fine to Medium Sand	Dry
	9.5	10.0	Moist, Laminated/Varying Orange to Tan, Fine to Medium Sand, Trace Silt	Dry
3	10.0	11.1	No Recovery	
PID=0	11.1	13.0	Wet, Laminated/Varying Orange to Tan, Fine to Medium Sand, Trace Silt	Wet
	13.0	13.4	Wet, Tan, medium Gray Sand	Wet
	13.4	15.0	Wet, Medium to CG Sand, Tan	Wet
4	15.0	17.7	No Recovery	
PID=0	17.7	18.2	Wet, Medium to CG Sand, Tan	Wet
	18.2	18.7	Tan and Orange, Wet, MG Sand, Large Quartz Pebble @ 18.5	Wet
	18.7	18.8	Gray and Orange MG Sandy Clay	Moist
	18.8	19.0	Tan CG Sand	Wet
	19.0	19.2	Orange and Tan MG Sand, Trace Silt	Wet
	19.2	20.0	Laminated Tan, Black, Dark Brown FG to MG Sand	Wet
			Well Screened 8 – 18' bgs	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-04	Logger: KAD	Geologist: JGC	Date: 05/24/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PPMW-04S	Sample Interval 1.2-3.2	Time: 12:50	**Deep** PP-MW04D **Sample:**	Sample 8.35-Interval 9.25	Time: 12:55

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	2.0	No Recovery	
PID=0	2.0	2.35	Brown Silty Sand and Gravel	Dry
	2.35	3.5	Mottled Tan and Brown FG/MG Sand	Dry
	3.5	4.05	Dark Brown FG/MG Sand	Dry
	4.05	5.0	Mottled Tan and Light Brown FG to MG Sand	Dry
2	5.0	6.5	No Recovery	
PID=0	6.5	6.7	Fallback	Dry
	6.7	8.0	Light Brown and Orange FG/MG Sand	Dry
	8.0	10.0	Tan FG/MG Sand with Random Orange Lamination	Dry
3	10.0	11.5	No Recovery (water @10')	
PID=0	11.5	12.0	Fallback	Damp
	12.0	13.8	Laminated Tan and Light Brown FG/MG Sand Heavy Mineral Lamination@13.55'	Wet
	13.8	14.8	Tan FG/MG Sand	Wet
	14.8	15.0	Tan MG/CG Sand	Wet
4	15.0	18.35	No Recovery	
PID=0	18.35	19.45	Tan MG to CG Sand, Trace Pebbles	Wet
	19.45	19.7	Tan FG to MG Sand	Wet
	19.7	20.0	Tan and Orange MG/CG Sand	Wet
	SHOE @20.0		Orange and Grey Silty Clay	Wet
			Well Set @ 18'	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-05	Logger: KAD	Geologist: JGC	Date: 05/25/11	Page ___ of ___
Site Name: **Procino Plating**		Weather: Sunny, light breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			

Shallow Sample: PPMW-05S	Sample Interval 2.55-4.55	Time: 11:00	**Deep** PPMW-05D **Sample:**	Sample 9.0-10 Interval & 11.4-12.4	Time: 11:09

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	2.25	No Recovery	
PID=0	2.25	2.55	Silty FG/MG Sand/Topsoil	Dry
	2.55	3.3	Mottled Light and Dark Brown FG/MG Sand	Dry
	3.3	3.95	Tan and Light Brown FG/MG Sand	Dry
	3.95	5.0	Orangish Brown FG/MG Sand	Dry
2	5.0	6.5	No Recovery	
PID=0	6.5	6.9	Fallback	Dry
	6.9	8.35	Mottled Tan and Brown FG/MG Sand	Dry
	8.35	10.0	Laminated Tan and Brown FG/MG Sand	Dry
3	10.0	10.6	No Recovery	
PID=0	10.6	11.4	Fallback (Water @ 12-12.5)	
	11.4	12.55	Mottled Tan and Brown MG/CG Sand	Dry
	12.55	13.3	Mottled Tan and Brown MG/CG Sand	Wet
	13.3	15.0	Tan FG/MG Sand with Heavy Mineral Laminations	Wet
4	15.0	17.5	No Recovery	
PID=0	17.5	18.15	Tan FG/MG Sand	Wet
	18.15	18.5	Orangish Brown and Tan FG/MG Sand, Trace Pebbles @ Bottom	Wet
	18.5	20.0	Tan MG/VCG Sand, Trace Gravel	Wet
			Well Set @ 19'	

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SITE INVESTIGATION AND RESTORATION SECTION
LITHOLOGY LOG

Boring ID: PPMW-06	Logger: KAD	Geologist: JGC	Date: 05/25/11	Page___of___
Site Name: **Procino Plating**		Weather: Sunny, light breeze, warm, humid		
DNREC ID: **DE-0344**	Driller: Vironex			
Shallow Sample: PPMW-06S	Sample Interval 3.25-5.0	Time: 12:25	**Deep** PPMW-06D **Sample:**	Sample 8.0-Interval 10.0	Time: 12:31

Core# PID	Start Depth	End Depth	Description	Moisture/ H_2O
1	0	3.1	No Recovery	
PID=0	3.1	3.25	Topsoil and Roots	Dry
	3.25	4.35	Mottled Tan, Light and Dark Brown FG/MG Sand, Trace Organics	Dry
	4.35	5.0	Laminated Tan, Light and Dark FG/MG Sand	Dry
2	5.0	7.15	No Recovery	
PID=0	7.15	7.55	Fallback	
	7.55	8.2	Tan and Orangist Brown FG/MG Sand, Trace Silt	Dry
	8.2	9.0	Mottled Tan and Light Brown FG/MG Sand	Dry
	9.0	10.0	Laminated Tan and Light Brown FG/MG Sand – Moist @ 10!	Dry
3	10.0	10.75	No Recovery	
PID=0	10.75	11.8	Fallback	
	11.8	12.7	Tan FG/MG Sand	Wet
	12.7	14.2	Mottled Tan and Brown FG/MG Sand, Trace Gravel	Wet
	14.2	14.75	Tan FG/MG Sand, Trace Silt	Wet
	14.75	15.0	Laminated Brown and Tan FG/MG Sand	Wet
4	15.0	17.85	No Recovery	
PID=0	17.85	19.65	Tan MG/CG Sand with Trace Gravel, 2 Gravel lenses	Wet
			@18.45-18.7 and 19.1 – 19.35	
	19.65	19.7	Orange Silty MG Sand	Wet
	19.7	20.0	Mottled Grey and Orange Silty Clay with Trace FG Sand	Wet
			Well Set @ 18'	

APPENDIX C
WELL DEVELOPMENT FIELD LOGS
Procino Plating DE-0344

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE - 0344**
Well No.:	MW-01	**Sample No.:**	–
Date:	5/26/11	**Samplers:**	KAS/MMP/KAD
Weather:	Sunny/Hot/Humid	**Sample Time:**	–
Comments:	No Sampling – Developing Well Start Time @ 1202pm		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	Good/New				
Condition of Pad:	Good/New				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	17.87	Ft.
B.	**Depth to H_2O:**	8.58	Ft. @ 1200
C.	**H_2O Column Height:** (A – B)	9.29	Ft.
D.	**Purge Method Used:**	Parameter Stabilization	
	3 Well Volumes or Parameter Stabilization		
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	–	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1205	6.59	0.088	–	13.31	18.0	–	Turbidity Meter Malfunction
1213	6.83	0.085	–	13.02	18.1	–	
1223	6.86	0.084	–	12.05	18.7	–	Turbidity Based on Visual Clarity
1231	6.35	0.089	–	11.82	19.0	–	
1242	6.44	0.085	–	12.05	18.7	–	
END OF DEVELOPMENT							
APPROXIMATELY 5 GALLONS PURGED							

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE - 0344**
Well No.:	MW02	**Sample No.:**	–
Date:	5/26/11	**Samplers:**	KAD/KAS/MMP
Weather:	Sunny/Hot/Humid	**Sample Time:**	–
Comments:	No Sample – Developing Well, Start at 1115		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	New/Good				
Condition of Pad:	New/Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	18.45	Ft.
B.	**Depth to H_2O:**	8.30	Ft. @ 1109 am
C.	**H_2O Column Height:** (A – B)	10.15	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	–	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/l)	TEMP (°C)	SAL (%)	Comments
1115	5.55	0.229	–	12.01	18.5	–	Turbidity Meter Malfunction
1125	5.61	0.164	–	11.52	18.5	–	
1130	5.65	0.158	–	11.70	18.8	–	Turbidity Based on Visual Clear/Clarity
1135	5.61	0.158	–	11.84	18.9	–	
1140	5.98	0.167	–	11.80	19.2	–	
END OF DEVELOPMENT							
APPROXIMATELY 4.5 GALLONS PURGED							

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-03	**Sample No.:**	-
Date:	5/26/11	**Samplers:**	KAD/SAS/MMP
Weather:	Sunny/Hot/Humid	**Sample Time:**	-
Comments:	Start Time: 1026am		
	No Sample – Developing Well		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	-	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	-	(Y/N)//(Inches)
Condition of Casing:	New/Good				
Condition of Pad:	New/Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	17.8	Ft.
B.	**Depth to H_2O:**	9.5	Ft. @ 1020 am
C.	**H_2O Column Height:** (A – B)	8.3	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	-	(Inches)^2
F.	**One Well Volume:** (C x D)	-	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	-	Gallons
I.	**Actual Volume Purged to Stabilization:**	-	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1027	8.2	0.350	-	11.5	20.6	0.01	- Turbidity Meter Malfunction
1037	6.9	0.164	-	11.9	19.5	0.0	
1047	6.0	0.150	-	11.45	19.1	0.0	- Turbidity Based on Visual
1057	5.6	0.145	-	10.94	19.5		Clear /Clarity
END OF DEVELOPMENT							
APPROXIMATELY 4.5 GALLONS PURGED							

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-04	**Sample No.:**	–
Date:	5/26/11	**Samplers:**	SIRS
Weather:	Sunny/Hot/Humid	**Sample Time:**	–
Comments:	No Sample – Developing Well		
	Start @ 1400		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	Good/New				
Condition of Pad:	Good/New				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	17.79	Ft.
B.	**Depth to H_2O:**	11.56	Ft. @ 1400
C.	**H_2O Column Height:** (A – B)	6.23	Ft.
D.	**Purge Method Used:**		
	3 Well Volumes or	Parameter	
	Parameter Stabilization	Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	–	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1405	6.67	0.277	–	13.26	19.6	0	Turbidity Meter
1410	6.90	0.212	–	12.38	19.4	0	Malfunction
1415	6.70	0.208	–	12.33	19.3	0	Turbidity Based
1420	6.56	0.214	–	11.89	19.0	0	On Clarity
1430	6.76	0.218	–	12.06	19.2	0	
END OF DEVELOPMENT							
APPROXIMATE 3.5 GALLONS PURGED							

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-05	**Sample No.:**	–
Date:	5/26/11	**Samplers:**	SIRS
Weather:	Sunny/Hot/Humid	**Sample Time:**	–
Comments:	No Sampling – Developing Well Start @ 1332		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	Good/New				
Condition of Pad:	Good/New				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	18.34	Ft.
B.	**Depth to H_2O:**	16.18	Ft. @ 1332
C.	**H_2O Column Height:** (A – B)	7.16	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	–	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1335	6.26	0.284	–	13.34	18.8	–	Turbidity Meter Malfunction
1340	6.43	0.249	–	12.68	18.8	–	
1345	6.66	0.236	–	12.48	18.7	–	Turbidity Based on Visual Clear/Clarity
1350	6.64	0.229	–	12.57	19.0	–	
1355	6.69	0.215	–	12.52	19.0	–	
END OF DEVELOPMENT							
APPROXIMATELY 3 GALLONS PURGED							

WELL DEVELOPMENT FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE - 0344**
Well No.:	MW-06	**Sample No.:**	–
Date:	5/26/11	**Samplers:**	SIRS
Weather:	Sunny/Hot/Humid	**Sample Time:**	–
Comments:	No Sampling – Developing Well Start @ 1250		

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	Good/New				
Condition of Pad:	Good/New				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	17.74	Ft.
B.	**Depth to H_2O:**	10.43	Ft. @ 1250
C.	**H_2O Column Height:** (A – B)	7.31	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	–	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/l)	TEMP (°C)	SAL (%)	Comments
1255	6.58	0.292	–	13.92	19.9	–	Turbidity Meter Malfunction
1303	6.80	0.187	–	13.83	18.7	–	
1308	6.61	0.202	–	12.90	18.1	–	Turbidity Based on Visual Clear/Clarity
1313	6.13	0.184	–	12.90	17.9	–	
1318	6.05	0.177	–	12.03	17.9	–	
1323	6.00	0.186	–	12.11	18.1	–	
END OF DEVELOPMENT							
APPROXIMATELY 4 GALLONS PURGED							

APPENDIX D
GROUNDWATER SAMPLING FIELD LOGS
Procino Plating DE-0344

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE - 0344**
Well No.:	MW-01	**Sample No.:**	PPMW09
Date:	6/16/11	**Samplers:**	LGJ & KAS
Weather:	Sunny - cloudy	**Sample Time:**	1330
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	No	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:	Water very cloudy white purging				

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	–	Ft.
B.	**Depth to H_2O:**	8.80	Ft.
C.	**H_2O Column Height:** (A – B)	–	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	3	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1300	6.72	0.078	–	16.25	18.1	–	
1305	6.36	0.065	–	15.58	17.4	–	
1310	6.33	0.077	–	15.06	17.1	–	
1315	6.28	0.082	–	14.16	17.1	–	
1320	6.18	0.083	–	13.92	16.6	–	
1325	6.05	0.085	–	13.48	16.7	–	
1523	6.15	0.091	–	14.41	18.5	–	

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-02	**Sample No.:**	PPMW02
Date:	6/16/11	**Samplers:**	KAS & JGC
Weather:	Overcast - Sunny	**Sample Time:**	1215
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	-	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	N	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	-	Ft.
B.	**Depth to H_2O:**	8.52	Ft.
C.	**H_2O Column Height:** (A – B)	-	Ft.
D.	**Purge Method Used:**		
	3 Well Volumes or Parameter Stabilization	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	-	(Inches)^2
F.	**One Well Volume:** (C x D)	-	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	-	Gallons
I.	**Actual Volume Purged to Stabilization:**	2.5 - 3	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/l)	TEMP (°C)	SAL (%)	Comments
1143	6.44	0.178	-	12.71	19.3	-	
1150	6.55	0.168	-	12.35	19.6	-	
1155	6.48	0.169	-	12.31	18.1	-	
1200	6.49	0.169	-	12.33	18.6	-	
1205	6.51	0.174	-	12.66	18.9	-	
1240	6.53	0.169	-	14.03	19.5	-	

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-03	**Sample No.:**	PPMW03
Date:	06/16/11	**Samplers:**	KAS & JGC
Weather:	Overcast 75°	**Sample Time:**	1015
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	N	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:	MS/MSD Collected				

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	–	Ft.
B.	**Depth to H_2O:**	9.78	Ft.
C.	**H_2O Column Height:** (A – B)	–	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	3	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
0945	6.03	0.141	–	9.46	18.5	–	
0950	5.87	0.138	–	8.85	17.8	–	
0955	5.80	0.137	–	8.37	17.6	–	
1000	5.71	0.137	–	8.41	17.4	–	
1005	5.59	0.137	–	8.35	17.4	–	
1010	5.53	0.137	–	8.15	17.4	–	
1125	5.89	0.137	–	11.14	19.5	–	Purge rate was increased during sampling of PEST/PCB note for elevated DO

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-04	**Sample No.:**	PPMW04
Date:	6/16/11	**Samplers:**	KAS & JGC
Weather:	Overcast 75°	**Sample Time:**	0845
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	–	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	–	Ft.
B.	**Depth to H_2O:**	11.79	Ft.
C.	**H_2O Column Height:** (A – B)	–	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	3	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	2.5	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/l)	TEMP (°C)	SAL (%)	Comments
0815	6.42	1.11	–	9.18	19.8	–	
0820	6.51	0.268	–	9.41	18.7	–	
0825	6.25	0.238	–	9.35	18.4	–	
0830	6.22	0.232	–	9.13	18.3	–	
0835	6.27	0.230	–	9.02	18.2	–	
0840	6.10	0.232	–	8.75	18.2	–	
	6.23	0.231	–	9.62	18.9	–	

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW05	**Sample No.:**	PPMW05
Date:	6/17/11	**Samplers:**	KAS & JGC
Weather:	Sunny & Warm	**Sample Time:**	1055
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	N	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	–	Ft.
B.	**Depth to H_2O:**	11.40	Ft.
C.	**H_2O Column Height:** (A – B)	–	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stablization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	3	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/*l*)	TEMP (°C)	SAL (%)	Comments
1025	6.48	0.199	–	11.52	19.1	–	
1030	6.54	0.195	–	11.17	17.8	–	
1035	6.55	0.195	–	11.10	17.6	–	
1040	6.65	0.199	–	10.78	17.5	–	
1045	6.65	0.199	–	10.63	17.8	–	
1050	6.82	0.198	–	12.56	19.1	–	

GROUNDWATER SAMPLING FIELD DATA SHEET

Site Name:	Procino Plating	**Site No.:**	**DE -0344**
Well No.:	MW-06	**Sample No.:**	PPMW06
Date:	6/17/11	**Samplers:**	JGC & KAS
Weather:	Sunny & warm 80°	**Sample Time:**	0945
Comments:			

WELL OBSERVATIONS

Flush Mount:	Y	(Y/N)	**Locked:**	Y	(Y/N)
Stick Up:	N	(Y/N)	**PID:**	–	(PPM)
Well Diameter:	1"	(Inches)	**NAPL:**	No	(Y/N)//(Inches)
Condition of Casing:	Good				
Condition of Pad:	Good				
Comments:					

FIELD MEASUREMENTS

A.	**Depth to Bottom:**	–	Ft.
B.	**Depth to H_2O:**	10.67	Ft.
C.	**H_2O Column Height:** (A – B)	–	Ft.
D.	**Purge Method Used:** *3 Well Volumes or Parameter Stabilization*	Parameter Stabilization	
E.	**Well Factor:** 0.041 x (Well Diameter)^2	–	(Inches)^2
F.	**One Well Volume:** (C x D)	–	GPF (from sheet)
G.	**No. Volumes to be Purged:**	**3**	
H.	**Total Volume to be Purged:** (F x G)	–	Gallons
I.	**Actual Volume Purged to Stabilization:**	4	Gallons

Time	pH	COND (mS/cm)	TURB (NTU)	DO (mg/l)	TEMP (°C)	SAL (%)	Comments
0915	6.12	0.149	–	10.77	18.7	–	
0920	6.09	0.158	–	11.62	17.8	–	
0925	6.07	0.163	–	10.97	17.5	–	
0930	5.77	0.166	–	10.10	17.3	–	
0935	5.68	0.167	–	10.13	17.6	–	
0940	5.75	0.163	–	10.76	17.5	–	
1015	6.15	0.164	–	10.89	18.8	–	

APPENDIX E
SOIL SAMPLE SCREENING RESULTS
Procino Plating DE-0344

APPENDIX F
CHAIN OF CUSTODY RECORDS
Procino Plating DE-0344

Environmental Laboratory Section - Division of Water
Department of Natural Resources and Environmental Control
89 Kings Highway, Dover, DE 19901 (302) 739-9942

FIELD CHAIN OF CUSTODY

(Complete in BLUE ink)

copy

Client : Robert M. Schulte
Address : DNREC - Division of Air & Waste Management
391 Lukens Drive, New Castle, DE 19720
Phone No.: (302) 395-2600

Report To : Robert M. Schulte
Invoice To : Robert M. Schulte
Account :
ELS Order ID :

PROJECT NAME: **DE-0344 (Procino Plating)**

SAMPLERS (Please Print): PRICE | STANLEY

(ELS Use Only) Lab Log No.	Client Sample Description	Sample Date	Sample Time	Matrix*	Comp	Grab	No. Of Containers	ANALYSES: VOA	SVOA	Metals (total & diss)	REMARKS
	Trip Blank	4/27/11	1200	SO		✓	1	✓			
	PP-MW03-S	5-24-11	0918	SOIL	X		2	X	X	X	
	PP-MW03D	↓	0925	↓	↓		↓	↓	↓	↓	
	PP-SB03S		1040								
	PP-SB03D		1045								
	PP-MW02S		1100								
	PP-MW02D		1105								
	PP-SB02S		1215								
	PP-SB02D		1220								
	PP-SB01S	↓	1250	↓	↓		↓	↓	↓	↓	

RELINQUISHED BY: *(signature)*	DATE	TIME	RECEIVED BY: *(signature)*

DW - drinking water
ER - equip. rinseate
GW - ground water
Lab - lab water
LW - liquid waste
SE - sediment
SL - sludge
SO - soil
SW - surface water
TI - tissue
WS - solid waste
WW - waste water

COMMENTS:

Is laboratory chain-of-custody required?
Yes / No

ELS USE ONLY
Sample Conditions (circle response):
1. Samples match COC? Yes/No 2. Bottles supplied by ELS? Yes/No 3. Samples received broken/leaking? Yes/No 4. Cooler temp bottle 2-6 degrees? Yes/No/NA
5. Properly preserved? Yes/No 6. VOA/DO containers free of headspace? Yes/No/NA 7. Holding times expired? Yes/No 8. Volume sufficient for analysis? Yes/No

Environmental Laboratory Section - Division of Water
Department of Natural Resources and Environmental Control
89 Kings Highway, Dover, DE 19901 (302) 739-9942

FIELD CHAIN OF CUSTODY

(Complete in BLUE ink)

Client : Robert M. Schulte
Address : DNREC - Division of Air & Waste Management
391 Lukens Drive, New Castle, DE 19720
Phone No.: (302) 395-2600

Report To : Robert M. Schulte
Invoice To : Robert M. Schulte
Account :
ELS Order ID :

PROJECT NAME: **DE-0344 (Procino Plating)**

SAMPLERS (Please Print): PRICE/STANLEY

(ELS Use Only) Lab Log No.	Client Sample Description	Sample Date	Sample Time	Matrix*	Comp	Grab	No. Of Containers	ANALYSES: VOA	SVOA	Metals (total & diss)	REMARKS
	PP-SB01D	5/24/11	1255	SOIL	X		2	X	X	X	
	PP-MW01S	↓	1310	↓	↓		↓	↓	↓	↓	
	PP-MW01D	↓	1315	↓	↓		↓	↓	↓	↓	

RELINQUISHED BY: *(signature)*	DATE	TIME	RECEIVED BY: *(signature)*

DW - drinking water
ER - equip. rinseate
GW - ground water
Lab - lab water
LW - liquid waste
SE - sediment
SL - sludge
SO - soil
SW - surface water
TI - tissue
WS - solid waste
WW - waste water

COMMENTS:

Is laboratory chain-of-custody required?
Yes / No

ELS USE ONLY
Sample Conditions (circle response):
1. Samples match COC? Yes/No 2. Bottles supplied by ELS? Yes/No 3. Samples received broken/leaking? Yes/No 4. Cooler temp bottle 2-6 degrees? Yes/No/NA
5. Properly preserved? Yes/No 6. VOA/DO containers free of headspace? Yes/No/NA 7. Holding times expired? Yes/No 8. Volume sufficient for analysis? Yes/No

Environmental Laboratory Section - Division of Water
Department of Natural Resources and Environmental Control
89 Kings Highway, Dover, DE 19901 (302) 739-9942

FIELD CHAIN OF CUSTODY

(Complete in BLUE ink)

COPY

Client : Robert M. Schulte
Address : DNREC - Division of Air & Waste Management
391 Lukens Drive, New Castle, DE 19720
Phone No.: (302) 395-2600

Report To : Robert M. Schulte
Invoice To : Robert M. Schulte
Account :
ELS Order ID :

PROJECT NAME: **DE-0344 (Procino Plating)**

SAMPLERS (Please Print)

(ELS Use Only) Lab Log No.	Client Sample Description	Sample Date	Sample Time	Matrix*	Comp	Grab	No. Of Containers	ANALYSES: VOA	SVOA	Metals (total & diss)	REMARKS
	PP-MW01S	5-25-11	0917	SOIL	X		2	X	X	X	
	PP-MW01D		0922								
	PP-SB01S		1029								
	PP-SB01D		1042								
	PP-MW05S		1100								
	PP-MW05D		1109								
	PP-SB06S		1330								
	PP-SB06D		1336								
	PP-MW06S		1225								
	PP-MW06D	↓	1231	↓	↓		↓	↓	↓	↓	

RELINQUISHED BY: *(signature)*	DATE	TIME	RECEIVED BY: *(signature)*

DW - drinking water
ER - equip. rinseate
GW - ground water
Lab - lab water
LW - liquid waste
SE - sediment
SL - sludge
SO - soil
SW - surface water
TI - tissue
WS - solid waste
WW - waste water

COMMENTS:

Is laboratory chain-of-custody required?
Yes / No

ELS USE ONLY
Sample Conditions (circle response):
1. Samples match COC? Yes/No 2. Bottles supplied by ELS? Yes/No 3. Samples received broken/leaking? Yes/No 4. Cooler temp bottle 2-6 degrees? Yes/No/NA
5. Properly preserved? Yes/No 6. VOA/DO containers free of headspace? Yes/No/NA 7. Holding times expired? Yes/No 8. Volume sufficient for analysis? Yes/No

Environmental Laboratory Section - Division of Water
Department of Natural Resources and Environmental Control
89 Kings Highway, Dover, DE 19901 (302) 739-9942

FIELD CHAIN OF CUSTODY

(Complete in BLUE ink)

CCM

Client : Robert M. Schulte
Address : DNREC - Division of Air & Waste Management
391 Lukens Drive, New Castle, DE 19720
Phone No.: (302) 395-2600

Report To : Robert M. Schulte
Invoice To : Robert M. Schulte
Account :
ELS Order ID :

PROJECT NAME: **DE-0344 (Procino Plating)**

SAMPLERS (Please Print): PRICE/STANLEY

(ELS Use Only) Lab Log No.	Client Sample Description	Sample Date	Sample Time	Matrix*	Comp	Grab	No. Of Containers	ANALYSES: VOA	SVOA	Metals (total & diss)	REMARKS
	PP-SB075	5-26-11	0912	SOIL	X		2	X	X	X	
	PP-SB07D	↓	0920	↓	↓		↓	↓	↓	↓	
	PP-SB04S		0942								
	PP-SB04D		0946								
	PP-SB40D		0924								

RELINQUISHED BY: *(signature)*	DATE	TIME	RECEIVED BY: *(signature)*

DW - drinking water
ER - equip. rinseate
GW - ground water
Lab - lab water
LW - liquid waste
SE - sediment
SL - sludge
SO - soil
SW - surface water
TI - tissue
WS - solid waste
WW - waste water

COMMENTS:

Is laboratory chain-of-custody required?
Yes / No

ELS USE ONLY
Sample Conditions (circle response):
1. Samples match COC? Yes/No 2. Bottles supplied by ELS? Yes/No 3. Samples received broken/leaking? Yes/No 4. Cooler temp bottle 2-6 degrees? Yes/No/NA
5. Properly preserved? Yes/No 6. VOA/DO containers free of headspace? Yes/No/NA 7. Holding times expired? Yes/No 8. Volume sufficient for analysis? Yes/No

Environmental Laboratory Section - Division of Water
Department of Natural Resources and Environmental Control
89 Kings Highway, Dover, DE 19901 (302) 739-9942

FIELD CHAIN OF CUSTODY

(Complete in BLUE ink)

Client : Robert M. Schulte
Address : DNREC - Division of ~~Air & Waste Management~~ WASTE & HAZARDOUS SUBSTANCES
391 Lukens Drive, New Castle, DE 19720
Phone No.: (302) 395-2600

Report To : Robert M. Schulte
Invoice To : Robert M. Schulte
Account :
ELS Order ID : 1106041

PROJECT NAME: **DE-0344 (Procino Plating)**

SAMPLERS (Please Print): JOHN CARGILL / KRYSTAL STANLEY

(ELS Use Only) Lab Log No.	Client Sample Description	Sample Date	Sample Time	Matrix*	Comp	Grab	No. Of Containers	ANALYSES: VOA	SVOA	Metals (total & diss)	REMARKS
1106041-001	Trip Blank	4/25/11	1100	GW		✓	3	✓	✓	✓	
1106041-002	PPMW01	6/16/11	1330	GW		✓	7	3	2	1	
1106041-003	PPMW02	6/16/11	1215	GW		✓	7	✓	✓	✓	
1106041-004	PPMW03	6/16/11	1015	GW		✓	12	✓	✓	✓	USE FOR MS/MSD
1106041-005	PPMW04	6/16/11	0895	GW		✓	7	✓	✓	✓	
1106041-006	PPMW05	6/17/11	1055	GW		✓	7	✓	✓	✓	
1106041-007	PPMW06	6/17/11	~~1245~~ 0945	GW		✓	7	✓	✓	✓	
1106041-008	DUP-1	6/16/11	NR	GW		✓	7	✓	✓	✓	

RELINQUISHED BY: *(signature)*	DATE	TIME	RECEIVED BY: *(signature)*
[signature]	6-17-11	1255	[signature] Ex. 4 CBI

DW - drinking water
ER - equip. rinseate
GW - ground water
Lab - lab water
LW - liquid waste
SE - sediment
SL - sludge
SO - soil
SW - surface water
TI - tissue
WS - solid waste
WW - waste water

COMMENTS:

Is laboratory chain-of-custody required?
(Yes) / No

ELS USE ONLY
Sample Conditions (circle response):
1. Samples match COC? (Yes)/No 2. Bottles supplied by ELS? (Yes)/No 3. Samples received broken/leaking? Yes/(No) 4. Cooler temp bottle 2-6 degrees? (Yes)/No/NA
5. Properly preserved? (Yes)/No 6. VOA/DO containers free of headspace? (Yes)/No/NA 7. Holding times expired? Yes/(No) 8. Volume sufficient for analysis? (Yes)/No

Coc:040101

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 2

Name (for report and invoice): BOB SCHULTE	Samplers Name (Printed): DNREC-SIRS	Site/Project Identification: PROCINO PLATING (DE-0344)
Company: DNREC-SIRS	P. O. #	State (Location of site): NJ: ☐ NY: ☐ Other:
		Regulatory Program:
Address: 391 LUKENS DRIVE	Analysis Turnaround Time: Standard ☐	
City: NEWCASTLE State: DE	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: 302-395-2600 Fax: 302-395-2601		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No:

Sample Identification	Date	Time	Matrix	No. of Cont.	PEST PCB CN	Sample Numbers
PP-MW03S	5-24-11	0918	SOIL	1	X	
PP-MW03D		0925				
PP-SB03S		1040				
PP-SB03D		1045				
PP-MW02S		1100				
PP-MW02D		1105				
PP-SB02S		1215				
PP-SB02D		1220				
PP-SB01S		1250				
PP-SB01D		1255				

Preservation Used: (1 = ICE) 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH 6 = Other _____, 7 = Other _____

Soil: 10
Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
			1)	
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

184045

CMS

ED_005024_00000667-00082

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Name (for report and invoice) BOB SCHULTE	Samplers Name (Printed) DNREC-SIRS	Site/Project Identification PROCINO PLATING (DE-0344)
Company DNREC-SIRS	P. O. #	State (Location of site): NJ: ☐ NY: ☐ Other:
Address 391 LUKENS DRIVE	Analysis Turnaround Time: Standard ☐	Regulatory Program:
City NEWCASTLE State DE	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone 302-395-2600 Fax 302-395-2601		

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

LAB USE ONLY
Project No:
Job No:

Sample Identification	Date	Time	Matrix	No. of Cont.	PBT / PCB / CN	Sample Numbers
PP-MW03S	5-24-11	0918	SOIL	1	X	
PP-MW03D		0925				
PP-SB03S		1040				
PP-SB03D		1045				
PP-MW02S		1100				
PP-MW02D		1105				
PP-SB02S		1215				
PP-SB02D		1220				
PP-SB01S		1250				
PP-SB01D		1255				

Preservation Used: (1 = ICE) 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH — Soil: 10
6 = Other _____, 7 = Other _____ — Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
		/	1)	
Relinquished by 2)	Company	Date / Time /	Received by 2)	Company
Relinquished by 3)	Company	Date / Time /	Received by 3)	Company
Relinquished by 4)	Company	Date / Time /	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0408)

184045

CMS

ED_005024_00000667-00083

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice)	Samplers Name (Printed)	Site/Project Identification
BOB SCHULTE	DNREC-SIRS	PRUCINO PLATING (DE-0344)
Company: DNREC-SIRS	P. O. #	State (Location of site): NJ: ☐ NY: ☐ Other:
		Regulatory Program:
Address: 391 LUKENS DR	Analysis Turnaround Time: Standard ☐	
City: NEWCASTLE State: DE	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: 302-395-2600 Fax: 302-395-2601		

Sample Identification	Date	Time	Matrix	No. of Cont.	PEST/PCB/CN	Sample Numbers
PP-MW04S	5-25-11	0917	SOIL	1	X	
PP-MW04D		0922				
PP-SB05S		1029				
PP-SB05D		1043				
PP-MW05S		1100				
PP-MW05D		1109				
PP-SB06S		1330				
PP-SB06D		1336				
PP-MW06S		1225				
PP-MW06D		1231				

LAB USE ONLY
Project No:
Job No:

ANALYSIS REQUESTED (ENTER "X" BELOW TO INDICATE REQUEST)

Preservation Used: (1 = ICE), 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Soil: 10
Water:

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
		/	1)	
Relinquished by 2)	Company	Date / Time /	Received by 2)	Company
Relinquished by 3)	Company	Date / Time /	Received by 3)	Company
Relinquished by 4)	Company	Date / Time /	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132).
Massachusetts (M-NJ312), North Carolina (No. 578)

TAL - 0016 (0408)

ED_005024_00000667-00084

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page 1 of 1

Name (for report and invoice): BOB SCHULTE	Samplers Name (Printed): DNREC-SIRS	Site/Project Identification: PRUCINO PLATING (DE-0344)
Company: DNREC-SIRS	P. O. #	State (Location of site): NJ: ☐ NY: ☐ Other:
		Regulatory Program:
Address: 391 LUKENS DR	Analysis Turnaround Time: Standard ☐	
City: NEWCASTLE State: DE	Rush Chrages Authorized For: 2 Week ☐ 1 Week ☐ Other ☐	
Phone: 302-395/2600 Fax: 302-395-2601		

Sample Identification	Date	Time	Matrix	No. of Cont.	PEST/PCB/ICM	LAB USE ONLY Sample Numbers
PP-SB07S	5-26-11	0912	SOIL	1	X	
PP-SB07D		0920				
PP-SB04S		0942				
PP-SB04D		0946				
PP-SB40D		0924				

LAB USE ONLY: Project No: ____ Job No: ____

Preservation Used: (1 = ICE), 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH — Soil: 5 — Water:
6 = Other _____, 7 = Other _____

Special Instructions _____ Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
		/	1)	
Relinquished by 2)	Company	Date / Time /	Received by 2)	Company
Relinquished by 3)	Company	Date / Time /	Received by 3)	Company
Relinquished by 4)	Company	Date / Time /	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

777 New Durham Road
Edison, New Jersey 08817
Phone: (732) 549-3900 Fax: (732) 549-3679

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY / ANALYSIS REQUEST

Page ____ of ____

Name (for report and invoice)	Samplers Name (Printed)	Site/Project Identification
ROBERT M. SCHULTE	JOHN CARGILL / KEYSTONE STANLEY	PLATING DE-0344
Company	P. O. #	State (Location of site): NJ: ☐ NY: ☐ Other: DE
DNREC - DIVISION OF WASTE & HAZ. SUBSTANCES		Regulatory Program: DNREC - SIRS
Address	Analysis Turnaround Time	
391 LUKENS DRIVE	Standard ☑	
City / State	Rush Chrages Authorized For:	
NEW CASTLE / DE	2 Week ☐	
Phone / Fax	1 Week ☐	
302-395-2600 / 302-395-2672	Other ☐	

Sample Identification	Date	Time	Matrix	No. of Cont.	PESTICIDE	PCB	CYANIDE	LAB USE ONLY Project No: / Job No: / Sample Numbers
PPMW01	6/16/11	1330	GW	5	✓	✓	✓	
PPMW02	6/16/11	1715	GW	5	✓	✓	✓	
PPMW03	6/16/11	1015	GW	14	✓	✓	✓	
PPMW04	6/16/11	0845	GW	5	✓	✓	✓	
PPMW05	6/17/11	1055	GW	5	✓	✓	✓	
PPMW06	6/17/11	0945	GW	5	✓	✓	✓	
DUP-1	6/16/11	NR	GW	5	✓	✓	✓	
Soil:								
Water:							5	

Preservation Used: 1 = ICE, 2 = HCl, 3 = H_2SO_4, 4 = HNO_3, 5 = NaOH
6 = Other _____, 7 = Other _____

Special Instructions USE PPMW03 FOR MS/MSD

Water Metals Filtered (Yes/No)? _____

Relinquished by	Company	Date / Time	Received by	Company
1)	DNREC	6/17/11/1436	1) Ex. 4 CBI	TestAmerica
Relinquished by 2)	Company	Date / Time	Received by 2)	Company
Relinquished by 3)	Company	Date / Time	Received by 3)	Company
Relinquished by 4)	Company	Date / Time	Received by 4)	Company

Laboratory Certifications: New Jersey (12028), New York (11452), Pennsylvania (68-522), Connecticut (PH-0200), Rhode Island (132). TAL - 0016 (0408)

Massachusetts (M-NJ312), North Carolina (No. 578)

APPENDIX G
SOIL SAMPLE ANALYTICAL RESULTS
Procino Plating DE-0344

APPENDIX H
GROUNDWATER SAMPLE ANALYTICAL RESULTS
Procino Plating DE-0344

APPENDIX I
DRINKING WATER SAMPLE ANALYTICAL RESULTS
Procino Plating DE-0344

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Co F

S267689

ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1258

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Road Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Blade, DE 19973 Sample Point # outside tap
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
601 / DE-331	Scheers / McClain	741-8630	741-8631

Free Chlorine_____mg/L Total Chlorine_____mg/L ☑ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☑ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267689 (383009)	**Date Collected:**	05/19/2010 12:58 pı
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADE, DE 19973	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Uranium	<0.0005 mg/L	<=0.03	05/21/2010
Manganese	**0.2378 mg/L**	<=0.05	05/21/2010
Barium	0.4015 mg/L	<=2.0000	05/21/2010
Antimony	<0.0005 mg/L	<=0.006	05/21/2010
Thallium	<0.0005 mg/L	<=0.002	05/21/2010
Selenium	<0.010 mg/L	<=0.05	05/21/2010
Chromium	0.0028 mg/L	<=0.1	05/21/2010
Lead	0.0027 mg/L	<=0.015	05/21/2010
Mercury	<0.0005 mg/L	<=0.002	05/21/2010
Cadmium	<0.0005 mg/L	<=0.005	05/21/2010
Beryllium	0.0008 mg/L	<=0.004	05/21/2010
Arsenic	<0.0005 mg/L	<=0.01	05/21/2010
Nickel	0.0134 mg/L		05/21/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267689 (383009)	**Date Collected:**	05/19/2010 12:58 pr
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pr
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADE, DE 19973	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note: **Sample previously released. Sample report ammended to include zinc values as requested by ODW.**

Test	Result	MCL	Date Released
EPA200.8			
Arsenic	<0.0005 mg/L	<=0.01	05/28/2010
Nickel	0.0134 mg/L		05/28/2010
Beryllium	0.0008 mg/L	<=0.004	05/28/2010
Cadmium	<0.0005 mg/L	<=0.005	05/28/2010
Chromium	0.0028 mg/L	<=0.1	05/28/2010
Lead	0.0027 mg/L	<=0.015	05/28/2010
Thallium	<0.0005 mg/L	<=0.002	05/28/2010
Selenium	<0.010 mg/L	<=0.05	05/28/2010
Mercury	<0.0005 mg/L	<=0.002	05/28/2010
Antimony	<0.0005 mg/L	<=0.006	05/28/2010
Uranium	<0.0005 mg/L	<=0.03	05/28/2010
Manganese	**0.2378 mg/L**	<=0.05	05/28/2010
Previously Reported As:	0.2378 mg/L		
Zinc	0.0357 mg/L	<=5	05/28/2010
Barium	0.4015 mg/L	<=2.0000	05/28/2010
Previously Reported As:	0.4015 mg/L		

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Code Number:

F

ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1300

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: **Ex. 6 Personal Privacy (PP)**

Facility Name: Ex. 6 Personal Privacy (PP) Rd Blades, DE 19973 Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point DT Sample Point # Outside tap
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
601 / DE-331	Scheers /McClain	741-8630	741-8631

Free Chlorine_____mg/L Total Chlorine_____mg/L ☑ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☑ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267688 (383008)	**Date Collected:**	05/19/2010 1:00 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
SM4500CN-F			
Cyanide	<0.05 mg/L	<0.2	05/21/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar C
F
S270183
ODW

TEST Request:
☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1304

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Rd. Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Blades, DE 19973 Sample Point # outside tap
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
601 / DE-331	Scheers /McClain	741-8630	741-8631

Free Chlorine_____mg/L Total Chlorine_____mg/L ☒ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]
☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]
☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]
☐ **Mn** ☐ **Cu**
☐ **Anions** [NO_3, NO_2, F, Cl]
☐ **CN**

☒ **VOCs** N/D
☐ **TTHM** EPA 524.2
☐ **HAA5** EPA 552.2
☐ **Pesticides** EPA 505
☐ **Herbicides** EPA 515.1
☐ **508**
☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270183 (383007)	**Date Collected:**	05/19/2010 1:04 pn
Property Owner/Facility	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAI
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA524.2			
1,2,4-trichlorobenzene	<0.5 µg/L	<80.000	05/24/2010
P-dichlorobenzene	<0.5 µg/L	<75.000	05/24/2010
O-dichlorobenzene	<0.5 µg/L	<600.000	05/24/2010
1,1,2-trichloroethane	<0.5 µg/L	<5.000	05/24/2010
Toluene	<0.5 µg/L	<1,000.000	05/24/2010
Tetrachloroethylene	<0.5 µg/L	<5.000	05/24/2010
Chlorobenzene	<0.5 µg/L	<100.000	05/24/2010
Ethylbenzene	<0.5 µg/L	<700.000	05/24/2010
Xylenes	<0.5 µg/L	<=10,000.000	05/24/2010
Styrene	<0.5 µg/L	<100.000	05/24/2010
Cis-1,2-dichloroethylene	<0.5 µg/L	<70.000	05/24/2010
1,1,1-trichloroethane	<0.5 µg/L	<200.000	05/24/2010
Carbon tetrachloride	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloropropane	<0.5 µg/L	<5.000	05/24/2010
Trichloroethylene	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloroethane	<0.5 µg/L	<5.000	05/24/2010
Benzene	<0.5 µg/L	<5.000	05/24/2010
Vinyl Chloride	<0.5 µg/L	<2.000	05/24/2010
1,1-dichloroethylene	<0.5 µg/L	<7.000	05/24/2010
Dichloromethane	<0.5 µg/L	<5.000	05/24/2010
Trans-1,2-dichloroethylene	<0.5 µg/L	<100.000	05/24/2010
Dichlorodifluormethane	<0.5 µg/L		05/24/2010
Chloromethane	<0.5 µg/L		05/24/2010
Bromomethane	<0.5 µg/L		05/24/2010
Chloroethane	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270183 (383007)	**Date Collected:**	05/19/2010 1:04 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
Trichlorfluoromethane	<0.5 µg/L		05/24/2010
Methyl tert-butyl ether (MTBE)	<0.5 µg/L		05/24/2010
1,1-dichloroethane	<0.5 µg/L		05/24/2010
2,2-dichloropropane	<0.5 µg/L		05/24/2010
1,1-dichloropropene	<0.5 µg/L		05/24/2010
Bromodichloromethane	<0.5 µg/L		05/24/2010
Dibromomethane	<0.5 µg/L		05/24/2010
Cis-1,3-dichlorpropene	<0.5 µg/L		05/24/2010
Chloroform	<0.5 µg/L		05/24/2010
Bromochloromethane	<0.5 µg/L		05/24/2010
Trans-1,3-dichloropropene	<0.5 µg/L		05/24/2010
1,3-dichloropropane	<0.5 µg/L		05/24/2010
Chlorodibromomethane	<0.5 µg/L		05/24/2010
Ethylene dibromide (EDB)	<0.5 µg/L		05/24/2010
Bromoform	<0.5 µg/L		05/24/2010
Isopropylbenzene	<0.5 µg/L		05/24/2010
1,1,2,2-tetrachlorethane	<0.5 µg/L		05/24/2010
1,2,3-trichloropropane	<0.5 µg/L		05/24/2010
Bromobenzene	<0.5 µg/L		05/24/2010
N-propylbenzene	<0.5 µg/L		05/24/2010
O-chlorotoluene	<0.5 µg/L		05/24/2010
1,3,5-trimethylbenzene	<0.5 µg/L		05/24/2010
P-chlorotoluene	<0.5 µg/L		05/24/2010
Tert-butylbenzene	<0.5 µg/L		05/24/2010
1,2,4-trimethylbenzene	<0.5 µg/L		05/24/2010
Sec-butylbenzene	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270183 (383007)	**Date Collected:**	05/19/2010 1:04 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) RD BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
P-isopropyltoluene	<0.5 µg/L		05/24/2010
M-dichlorobenzene	<0.5 µg/L		05/24/2010
1,1,1,2-tetrachloroethane	<0.5 µg/L		05/24/2010
N-butylbenzene	<0.5 µg/L		05/24/2010
Dibromochloropropane	<0.5 µg/L		05/24/2010
Hexachlorobutadiene	<0.5 µg/L		05/24/2010
Naphthalene	<0.5 µg/L		05/24/2010
1,2,3-trichlorobenzene	<0.5 µg/L		05/24/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar F *S267691* ODW TM

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1225

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: **Ex. 6 Personal Privacy** Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Blades, DE 19973 Sample Point # DT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☒ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267691 (383011)	**Date Collected:**	05/19/2010 12:25 pı
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Barium	0.1316 mg/L	<=2.0000	05/21/2010
Manganese	**0.1723 mg/L**	<=0.05	05/21/2010
Uranium	<0.0005 mg/L	<=0.03	05/21/2010
Nickel	0.0020 mg/L		05/21/2010
Arsenic	<0.0005 mg/L	<=0.01	05/21/2010
Beryllium	<0.0005 mg/L	<=0.004	05/21/2010
Mercury	<0.0005 mg/L	<=0.002	05/21/2010
Lead	<0.0005 mg/L	<=0.015	05/21/2010
Chromium	0.0038 mg/L	<=0.1	05/21/2010
Cadmium	<0.0005 mg/L	<=0.005	05/21/2010
Selenium	<0.010 mg/L	<=0.05	05/21/2010
Antimony	<0.0005 mg/L	<=0.006	05/21/2010
Thallium	<0.0005 mg/L	<=0.002	05/21/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267691 (383011)	**Date Collected:**	05/19/2010 12:25 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP) BLADES, DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note: **Sample previously released. Sample report ammended to include zinc values as requested by ODW.**

Test	Result	MCL	Date Released
EPA200.8			
Barium	0.1316 mg/L	<=2.0000	05/28/2010
Previously Reported As:	0.1316 mg/L		
Zinc	0.0211 mg/L	<=5	05/28/2010
Manganese	**0.1723 mg/L**	<=0.05	05/28/2010
Previously Reported As:	0.1723 mg/L		
Uranium	<0.0005 mg/L	<=0.03	05/28/2010
Selenium	<0.010 mg/L	<=0.05	05/28/2010
Thallium	<0.0005 mg/L	<=0.002	05/28/2010
Antimony	<0.0005 mg/L	<=0.006	05/28/2010
Lead	<0.0005 mg/L	<=0.015	05/28/2010
Mercury	<0.0005 mg/L	<=0.002	05/28/2010
Chromium	0.0038 mg/L	<=0.1	05/28/2010
Beryllium	<0.0005 mg/L	<=0.004	05/28/2010
Cadmium	<0.0005 mg/L	<=0.005	05/28/2010
Nickel	0.0020 mg/L		05/28/2010
Arsenic	<0.0005 mg/L	<=0.01	05/28/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Code Number:

F 

ODW CH

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1223

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Seaford DE 19973 Sample Point # outside tap
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☑ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267690 (383010)	**Date Collected:**	05/19/2010 12:23 pı
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
SM4500CN-F			
Cyanide	<0.05 mg/L	<0.2	05/21/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Code Number

F

ODW VOC

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1328

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Seaford Bridge DE Sample Point # DT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☐ **VOCs** N/D

☐ **TTHM** EPA 524.2

☐ **HAA5** EPA 552.2

☐ **Pesticides** EPA 505

☐ **Herbicides** EPA 515.1

☐ **508**

☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270184 (383012)	**Date Collected:**	05/19/2010 1:28 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA524.2			
Dichlorodifluormethane	<0.5 µg/L		05/24/2010
Chloromethane	<0.5 µg/L		05/24/2010
Bromomethane	<0.5 µg/L		05/24/2010
Chloroethane	<0.5 µg/L		05/24/2010
Trichlorfluoromethane	<0.5 µg/L		05/24/2010
Methyl tert-butyl ether (MTBE)	<0.5 µg/L		05/24/2010
1,1-dichloroethane	<0.5 µg/L		05/24/2010
2,2-dichloropropane	<0.5 µg/L		05/24/2010
1,1-dichloropropene	<0.5 µg/L		05/24/2010
Bromodichloromethane	<0.5 µg/L		05/24/2010
Dibromomethane	<0.5 µg/L		05/24/2010
Cis-1,3-dichlorpropene	<0.5 µg/L		05/24/2010
Chloroform	<0.5 µg/L		05/24/2010
Bromochloromethane	<0.5 µg/L		05/24/2010
Trans-1,3-dichloropropene	<0.5 µg/L		05/24/2010
1,3-dichloropropane	<0.5 µg/L		05/24/2010
Chlorodibromomethane	<0.5 µg/L		05/24/2010
Ethylene dibromide (EDB)	<0.5 µg/L		05/24/2010
1,1,1,2-tetrachloroethane	<0.5 µg/L		05/24/2010
Bromoform	<0.5 µg/L		05/24/2010
Isopropylbenzene	<0.5 µg/L		05/24/2010
1,1,2,2-tetrachlorethane	<0.5 µg/L		05/24/2010
1,2,3-trichloropropane	<0.5 µg/L		05/24/2010
Bromobenzene	<0.5 µg/L		05/24/2010
N-propylbenzene	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270184 (383012)	**Date Collected:**	05/19/2010 1:28 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
O-chlorotoluene	<0.5 µg/L		05/24/2010
1,3,5-trimethylbenzene	<0.5 µg/L		05/24/2010
P-chlorotoluene	<0.5 µg/L		05/24/2010
Tert-butylbenzene	<0.5 µg/L		05/24/2010
1,2,4-trimethylbenzene	<0.5 µg/L		05/24/2010
Sec-butylbenzene	<0.5 µg/L		05/24/2010
P-isopropyltoluene	<0.5 µg/L		05/24/2010
M-dichlorobenzene	<0.5 µg/L		05/24/2010
N-butylbenzene	<0.5 µg/L		05/24/2010
Dibromochloropropane	<0.5 µg/L		05/24/2010
Hexachlorobutadiene	<0.5 µg/L		05/24/2010
Naphthalene	<0.5 µg/L		05/24/2010
1,2,3-trichlorobenzene	<0.5 µg/L		05/24/2010
Trans-1,2-dichloroethylene	<0.5 µg/L	<100.000	05/24/2010
Dichloromethane	<0.5 µg/L	<5.000	05/24/2010
1,1-dichloroethylene	<0.5 µg/L	<7.000	05/24/2010
Vinyl Chloride	<0.5 µg/L	<2.000	05/24/2010
1,2-dichloroethane	<0.5 µg/L	<5.000	05/24/2010
Trichloroethylene	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloropropane	<0.5 µg/L	<5.000	05/24/2010
Carbon tetrachloride	<0.5 µg/L	<5.000	05/24/2010
Benzene	<0.5 µg/L	<5.000	05/24/2010
1,1,1-trichloroethane	<0.5 µg/L	<200.000	05/24/2010
Cis-1,2-dichloroethylene	<0.5 µg/L	<70.000	05/24/2010
Styrene	<0.5 µg/L	<100.000	05/24/2010
P-dichlorobenzene	<0.5 µg/L	<75.000	05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270184 (383012)	**Date Collected:**	05/19/2010 1:28 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pi
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

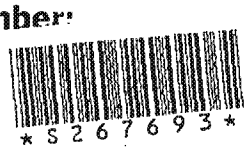
Test	Result	MCL	Date Released
Xylenes	<0.5 µg/L	<=10,000.000	05/24/2010
Ethylbenzene	<0.5 µg/L	<700.000	05/24/2010
Chlorobenzene	<0.5 µg/L	<100.000	05/24/2010
Tetrachloroethylene	<0.5 µg/L	<5.000	05/24/2010
Toluene	<0.5 µg/L	<1,000.000	05/24/2010
1,1,2-trichloroethane	<0.5 µg/L	<5.000	05/24/2010
O-dichlorobenzene	<0.5 µg/L	<600.000	05/24/2010
1,2,4-trichlorobenzene	<0.5 µg/L	<80.000	05/24/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Code Number:

F 

_____ ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 13:35

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Seaford, DE 19973 Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point OT Sample Point # Outside tap
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☒ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267693 (383016)	**Date Collected:**	05/19/2010 1:35 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Barium	0.7692 mg/L	<=2.0000	05/21/2010
Uranium	<0.0005 mg/L	<=0.03	05/21/2010
Thallium	<0.0005 mg/L	<=0.002	05/21/2010
Manganese	**0.1699 mg/L**	<=0.05	05/21/2010
Selenium	<0.010 mg/L	<=0.05	05/21/2010
Antimony	<0.0005 mg/L	<=0.006	05/21/2010
Chromium	0.0023 mg/L	<=0.1	05/21/2010
Cadmium	0.0005 mg/L	<=0.005	05/21/2010
Lead	0.0009 mg/L	<=0.015	05/21/2010
Mercury	<0.0005 mg/L	<=0.002	05/21/2010
Arsenic	<0.0005 mg/L	<=0.01	05/21/2010
Beryllium	0.0040 mg/L	<=0.004	05/21/2010
Nickel	0.0109 mg/L		05/21/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267693 (383016)	**Date Collected:**	05/19/2010 1:35 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OUTSIDE TAP	**Date Received:**	05/20/2010 12:55 pi
Sample Location:	Ex. 6 Personal Privacy (PP), SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note: **Sample previously released. Sample report ammended to include zinc values as requested by ODW.**

Test	Result	MCL	Date Released
EPA200.8			
Arsenic	<0.0005 mg/L	<=0.01	05/28/2010
Nickel	0.0109 mg/L		05/28/2010
Cadmium	0.0005 mg/L	<=0.005	05/28/2010
Beryllium	0.0040 mg/L	<=0.004	05/28/2010
Chromium	0.0023 mg/L	<=0.1	05/28/2010
Lead	0.0009 mg/L	<=0.015	05/28/2010
Antimony	<0.0005 mg/L	<=0.006	05/28/2010
Thallium	<0.0005 mg/L	<=0.002	05/28/2010
Mercury	<0.0005 mg/L	<=0.002	05/28/2010
Selenium	<0.010 mg/L	<=0.05	05/28/2010
Uranium	<0.0005 mg/L	<=0.03	05/28/2010
Manganese	**0.1699 mg/L**	<=0.05	05/28/2010
Previously Reported As:	0.1699 mg/L		
Zinc	1.3600 mg/L	<=5	05/28/2010
Previously Reported As:	1.2160 mg/L		
Barium	0.7692 mg/L	<=2.0000	05/28/2010
Previously Reported As:	0.7692 mg/L		

FINAL

CHEMICAL FORM

Delaware Public Health Laboral
30 Sunnyside Ri
Smyrna, DE 19977
(302) 223-1520

Bar Cc F

ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1345

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Seaford DE 19973 Facility # OT
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point outside tap Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☒ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267692 (383014)	**Date Collected:**	05/19/2010 1:45 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
SM4500CN-F			
Cyanide	<0.05 mg/L	<0.2	05/21/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar C(**F**

S270185

ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1350

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Seaford, DE 19973 Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point OT Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
601 / DE-331	Scheers /McClain	741-8630	741-8631

Free Chlorine_____mg/L Total Chlorine_____mg/L ☒ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☒ **VOCs** N/S

☐ **TTHM** EPA 524.2

☐ **HAA5** EPA 552.2

☐ **Pesticides** EPA 505

☐ **Herbicides** EPA 515.1

☐ **508**

☐ **525**

☐ **531**

☐ **504**

☐ **Gross Alpha**

☐ **Radium 226/228**

☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270185 (383015)	**Date Collected:**	05/19/2010 1:50 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA524.2			
O-dichlorobenzene	<0.5 µg/L	<600.000	05/24/2010
1,2,4-trichlorobenzene	<0.5 µg/L	<80.000	05/24/2010
1,1,2-trichloroethane	<0.5 µg/L	<5.000	05/24/2010
Toluene	<0.5 µg/L	<1,000.000	05/24/2010
Chlorobenzene	<0.5 µg/L	<100.000	05/24/2010
Tetrachloroethylene	<0.5 µg/L	<5.000	05/24/2010
Ethylbenzene	<0.5 µg/L	<700.000	05/24/2010
Xylenes	<0.5 µg/L	<=10,000.000	05/24/2010
P-dichlorobenzene	<0.5 µg/L	<75.000	05/24/2010
Styrene	<0.5 µg/L	<100.000	05/24/2010
Cis-1,2-dichloroethylene	<0.5 µg/L	<70.000	05/24/2010
1,1,1-trichloroethane	<0.5 µg/L	<200.000	05/24/2010
Carbon tetrachloride	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloropropane	<0.5 µg/L	<5.000	05/24/2010
Trichloroethylene	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloroethane	<0.5 µg/L	<5.000	05/24/2010
Benzene	<0.5 µg/L	<5.000	05/24/2010
Vinyl Chloride	<0.5 µg/L	<2.000	05/24/2010
1,1-dichloroethylene	<0.5 µg/L	<7.000	05/24/2010
Dichloromethane	<0.5 µg/L	<5.000	05/24/2010
Trans-1,2-dichloroethylene	<0.5 µg/L	<100.000	05/24/2010
Dichlorodifluormethane	<0.5 µg/L		05/24/2010
Chloromethane	<0.5 µg/L		05/24/2010
Bromomethane	<0.5 µg/L		05/24/2010
Chloroethane	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270185 (383015)	**Date Collected:**	05/19/2010 1:50 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
Trichlorfluoromethane	<0.5 µg/L		05/24/2010
Methyl tert-butyl ether (MTBE)	<0.5 µg/L		05/24/2010
1,1-dichloroethane	<0.5 µg/L		05/24/2010
2,2-dichloropropane	<0.5 µg/L		05/24/2010
1,1-dichloropropene	<0.5 µg/L		05/24/2010
Bromodichloromethane	<0.5 µg/L		05/24/2010
Dibromomethane	<0.5 µg/L		05/24/2010
Cis-1,3-dichlorpropene	<0.5 µg/L		05/24/2010
Chloroform	<0.5 µg/L		05/24/2010
Bromochloromethane	<0.5 µg/L		05/24/2010
Trans-1,3-dichloropropene	<0.5 µg/L		05/24/2010
1,3-dichloropropane	<0.5 µg/L		05/24/2010
Chlorodibromomethane	<0.5 µg/L		05/24/2010
Ethylene dibromide (EDB)	<0.5 µg/L		05/24/2010
Bromoform	<0.5 µg/L		05/24/2010
Isopropylbenzene	<0.5 µg/L		05/24/2010
1,1,2,2-tetrachlorethane	<0.5 µg/L		05/24/2010
1,2,3-trichloropropane	<0.5 µg/L		05/24/2010
Bromobenzene	<0.5 µg/L		05/24/2010
N-propylbenzene	<0.5 µg/L		05/24/2010
O-chlorotoluene	<0.5 µg/L		05/24/2010
1,3,5-trimethylbenzene	<0.5 µg/L		05/24/2010
P-chlorotoluene	<0.5 µg/L		05/24/2010
Tert-butylbenzene	<0.5 µg/L		05/24/2010
1,2,4-trimethylbenzene	<0.5 µg/L		05/24/2010
Sec-butylbenzene	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270185 (383015)	**Date Collected:**	05/19/2010 1:50 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pi
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
P-isopropyltoluene	<0.5 µg/L		05/24/2010
M-dichlorobenzene	<0.5 µg/L		05/24/2010
1,1,1,2-tetrachloroethane	<0.5 µg/L		05/24/2010
N-butylbenzene	<0.5 µg/L		05/24/2010
Dibromochloropropane	<0.5 µg/L		05/24/2010
Hexachlorobutadiene	<0.5 µg/L		05/24/2010
Naphthalene	<0.5 µg/L		05/24/2010
1,2,3-trichlorobenzene	<0.5 µg/L		05/24/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Co F *S267680* ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1357

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Facility Name: Seaford DE Facility # OT
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Outside tap Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine _____ mg/L Total Chlorine _____ mg/L ☐ **Not Chlorinated**

pH Field Test _____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth. _____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:** _____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267680 (383029)	**Date Collected:**	05/19/2010 1:57 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN/SCHEER
PWSID:	PRIVATE	**Collector ID:**	DE331
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	OUTSIDE TAP Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Nickel	0.0059 mg/L		05/21/2010
Beryllium	0.0007 mg/L	<=0.004	05/21/2010
Arsenic	<0.0005 mg/L	<=0.01	05/21/2010
Mercury	<0.0005 mg/L	<=0.002	05/21/2010
Lead	0.0032 mg/L	<=0.015	05/21/2010
Chromium	0.0031 mg/L	<=0.1	05/21/2010
Cadmium	0.0016 mg/L	<=0.005	05/21/2010
Antimony	<0.0005 mg/L	<=0.006	05/21/2010
Selenium	<0.010 mg/L	<=0.05	05/21/2010
Manganese	**0.1469 mg/L**	<=0.05	05/21/2010
Thallium	<0.0005 mg/L	<=0.002	05/21/2010
Uranium	<0.0005 mg/L	<=0.03	05/21/2010
Barium	0.2417 mg/L	<=2.0000	05/21/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267680 (383029)	**Date Collected:**	05/19/2010 1:57 pm
Property Owner/Facility	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN/SCHEER
PWSID:	PRIVATE	**Collector ID:**	DE331
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 p
Sample Location:	OUTSIDE TAP Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note: **Sample previously released. Sample report ammended to include zinc values as requested by ODW.**

Test	Result	MCL	Date Released
EPA200.8			
Barium	0.2417 mg/L	<=2.0000	05/28/2010
Previously Reported As:	0.2417 mg/L		
Zinc	6.9500 mg/L	<=5	05/28/2010
Previously Reported As:	5.8916 mg/L		
Thallium	<0.0005 mg/L	<=0.002	05/28/2010
Manganese	**0.1469 mg/L**	<=0.05	05/28/2010
Previously Reported As:	0.1469 mg/L		
Uranium	<0.0005 mg/L	<=0.03	05/28/2010
Selenium	<0.010 mg/L	<=0.05	05/28/2010
Antimony	<0.0005 mg/L	<=0.006	05/28/2010
Lead	0.0032 mg/L	<=0.015	05/28/2010
Mercury	<0.0005 mg/L	<=0.002	05/28/2010
Chromium	0.0031 mg/L	<=0.1	05/28/2010
Cadmium	0.0016 mg/L	<=0.005	05/28/2010
Beryllium	0.0007 mg/L	<=0.004	05/28/2010
Arsenic	<0.0005 mg/L	<=0.01	05/28/2010
Nickel	0.0059 mg/L		05/28/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Co F

S267679

ODW

CN

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 1355

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Facility Name: Seaford DE Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point OT Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☑ **CN**

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S267679 (383030)	**Date Collected:**	05/19/2010 1:55 pm
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN, DANNY
PWSID:	PRIVATE	**Collector ID:**	DE331
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pm
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
SM4500CN-F			
Cyanide	<0.05 mg/L	<0.2	05/21/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar C F

ODW

TEST Request:

☐ **Routine** ☐ **Complaint** ☐ **Confirmation***
X Special ☐ **MRT** ☐ **Field Blank**
☐ **Split** ☐ **Duplicate** ☐ **Replacement***

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Time: (military) 13:59

Collection Date: 5/19/10

PWSID # PRIVATE Supply Name: Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Facility Name: Seaford DE 19973 Facility # outside tap
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point OT Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
601 / DE-331	**Scheers /McClain**	**741-8630**	**741-8631**

Free Chlorine_____mg/L Total Chlorine_____mg/L ☐ **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

☐ **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

☐ **CN**

☑ **VOCs** P/D

☐ **TTHM** EPA 524.2

☐ **HAA5** EPA 552.2

☐ **Pesticides** EPA 505

☐ **Herbicides** EPA 515.1

☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270186 (383017)	**Date Collected:**	05/19/2010 1:59 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
EPA524.2			
Dichlorodifluormethane	<0.5 µg/L		05/24/2010
Chloromethane	<0.5 µg/L		05/24/2010
Bromomethane	<0.5 µg/L		05/24/2010
Chloroethane	<0.5 µg/L		05/24/2010
Trichlorfluoromethane	<0.5 µg/L		05/24/2010
Methyl tert-butyl ether (MTBE)	<0.5 µg/L		05/24/2010
1,1-dichloroethane	<0.5 µg/L		05/24/2010
2,2-dichloropropane	<0.5 µg/L		05/24/2010
1,1-dichloropropene	<0.5 µg/L		05/24/2010
Bromodichloromethane	<0.5 µg/L		05/24/2010
Dibromomethane	<0.5 µg/L		05/24/2010
Cis-1,3-dichlorpropene	<0.5 µg/L		05/24/2010
Chloroform	<0.5 µg/L		05/24/2010
Bromochloromethane	<0.5 µg/L		05/24/2010
Trans-1,3-dichloropropene	<0.5 µg/L		05/24/2010
1,3-dichloropropane	<0.5 µg/L		05/24/2010
Chlorodibromomethane	<0.5 µg/L		05/24/2010
Ethylene dibromide (EDB)	<0.5 µg/L		05/24/2010
1,1,1,2-tetrachloroethane	<0.5 µg/L		05/24/2010
Bromoform	<0.5 µg/L		05/24/2010
Isopropylbenzene	<0.5 µg/L		05/24/2010
1,1,2,2-tetrachlorethane	<0.5 µg/L		05/24/2010
1,2,3-trichloropropane	<0.5 µg/L		05/24/2010
Bromobenzene	<0.5 µg/L		05/24/2010
N-propylbenzene	<0.5 µg/L		05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270186 (383017)	**Date Collected:**	05/19/2010 1:59 pn
Property Owner/Facility	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pi
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
O-chlorotoluene	<0.5 µg/L		05/24/2010
1,3,5-trimethylbenzene	<0.5 µg/L		05/24/2010
P-chlorotoluene	<0.5 µg/L		05/24/2010
Tert-butylbenzene	<0.5 µg/L		05/24/2010
1,2,4-trimethylbenzene	<0.5 µg/L		05/24/2010
Sec-butylbenzene	<0.5 µg/L		05/24/2010
P-isopropyltoluene	<0.5 µg/L		05/24/2010
M-dichlorobenzene	<0.5 µg/L		05/24/2010
N-butylbenzene	<0.5 µg/L		05/24/2010
Dibromochloropropane	<0.5 µg/L		05/24/2010
Hexachlorobutadiene	<0.5 µg/L		05/24/2010
Naphthalene	<0.5 µg/L		05/24/2010
1,2,3-trichlorobenzene	<0.5 µg/L		05/24/2010
Vinyl Chloride	<0.5 µg/L	<2.000	05/24/2010
Trans-1,2-dichloroethylene	<0.5 µg/L	<100.000	05/24/2010
Cis-1,2-dichloroethylene	<0.5 µg/L	<70.000	05/24/2010
1,1-dichloroethylene	<0.5 µg/L	<7.000	05/24/2010
Dichloromethane	<0.5 µg/L	<5.000	05/24/2010
Benzene	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloroethane	<0.5 µg/L	<5.000	05/24/2010
Trichloroethylene	<0.5 µg/L	<5.000	05/24/2010
1,2-dichloropropane	<0.5 µg/L	<5.000	05/24/2010
1,1,1-trichloroethane	<0.5 µg/L	<200.000	05/24/2010
Carbon tetrachloride	<0.5 µg/L	<5.000	05/24/2010
P-dichlorobenzene	<0.5 µg/L	<75.000	05/24/2010
Styrene	<0.5 µg/L	<100.000	05/24/2010

FINAL

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S270186 (383017)	**Date Collected:**	05/19/2010 1:59 pn
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	SCHEERS/MCCLAII
PWSID:	PRIVATE	**Collector ID:**	601
Sample Point:	OT	**Date Received:**	05/20/2010 12:55 pı
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	

Specimen Note:

Test	Result	MCL	Date Released
Xylenes	<0.5 µg/L	<=10,000.000	05/24/2010
Ethylbenzene	<0.5 µg/L	<700.000	05/24/2010
Tetrachloroethylene	<0.5 µg/L	<5.000	05/24/2010
Chlorobenzene	<0.5 µg/L	<100.000	05/24/2010
Toluene	<0.5 µg/L	<1,000.000	05/24/2010
1,1,2-trichloroethane	<0.5 µg/L	<5.000	05/24/2010
1,2,4-trichlorobenzene	<0.5 µg/L	<80.000	05/24/2010
O-dichlorobenzene	<0.5 µg/L	<600.000	05/24/2010

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F *S283775*

DW 469876

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #** _____

Collection Date: 4/28/2011

Collection Time: (military) 11:56

PWSID # PRIVATE **Supply Name:** Not home

Facility Name: Ex. 6 Personal Privacy (PP) Facility # _____
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # W.T.
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____X____ mg/L Total Chlorine ____X____ mg/L X **Not Chlorinated**

pH Field Test _____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth. _____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:** _____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283775 (469076)	**Date Collected:**	04/28/2011 11:56 a
Property Owner/Facility:	NOT HOME	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	W.T.	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/05/2011
Chromium	0.0040 mg/L	<=0.1	05/05/2011
Manganese	0.0376 mg/L	<=0.05	05/05/2011
Nickel	0.0017 mg/L		05/05/2011
Zinc	<0.010 mg/L	<=5	05/05/2011
Arsenic	<0.0005 mg/L	<=0.01	05/05/2011
Selenium	<0.010 mg/L	<=0.05	05/05/2011
Cadmium	<0.0005 mg/L	<=0.005	05/05/2011
Antimony	<0.0005 mg/L	<=0.006	05/05/2011
Barium	0.0832 mg/L	<=2.0000	05/05/2011
Mercury	<0.0005 mg/L	<=0.002	05/05/2011
Thallium	<0.0005 mg/L	<=0.002	05/05/2011
Lead	<0.0005 mg/L	<=0.015	05/05/2011
Uranium	<0.0005 mg/L	<=0.03	05/05/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F

S283773

ODW 449077

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 11:44

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point DF Sample Point # K.S.
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____X____ mg/L Total Chlorine ____X____ mg/L X Not Chlorinated

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283773 (469077)	**Date Collected:**	04/28/2011 11:44 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	K.S.	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/05/2011
Chromium	0.0031 mg/L	<=0.1	05/05/2011
Manganese	0.0136 mg/L	<=0.05	05/05/2011
Nickel	0.0017 mg/L		05/05/2011
Zinc	<0.010 mg/L	<=5	05/05/2011
Arsenic	<0.0005 mg/L	<=0.01	05/05/2011
Selenium	<0.010 mg/L	<=0.05	05/05/2011
Cadmium	<0.0005 mg/L	<=0.005	05/05/2011
Antimony	<0.0005 mg/L	<=0.006	05/05/2011
Barium	0.0298 mg/L	<=2.0000	05/05/2011
Mercury	<0.0005 mg/L	<=0.002	05/05/2011
Thallium	<0.0005 mg/L	<=0.002	05/05/2011
Lead	<0.0005 mg/L	<=0.015	05/05/2011
Uranium	<0.0005 mg/L	<=0.03	05/05/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

* S 2 8 3 7 7 1 *

)W 469078

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

*Confirmation & *Replacement Requires Original Sample #

_____

Collection Date: __4/28/2011_____

Collection Time: (military) 11:37

PWSID #_PRIVATE___ Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # O.T.
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine____X_____mg/L Total Chlorine_____X____mg/L X Not Chlorinated

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]
☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]
☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]
☐ **Mn** ☐ **Cu**
☐ **Anions** [NO_3, NO_2, F, Cl]
CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283771 (469078)	**Date Collected:**	04/28/2011 11:37 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	O.T.	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/05/2011
Chromium	0.0033 mg/L	<=0.1	05/05/2011
Manganese	0.0011 mg/L	<=0.05	05/05/2011
Nickel	<0.0005 mg/L		05/05/2011
Zinc	<0.010 mg/L	<=5	05/05/2011
Arsenic	<0.0005 mg/L	<=0.01	05/05/2011
Selenium	<0.010 mg/L	<=0.05	05/05/2011
Cadmium	<0.0005 mg/L	<=0.005	05/05/2011
Antimony	<0.0005 mg/L	<=0.006	05/05/2011
Barium	<0.010 mg/L	<=2.0000	05/05/2011
Mercury	<0.0005 mg/L	<=0.002	05/05/2011
Thallium	<0.0005 mg/L	<=0.002	05/05/2011
Lead	<0.0005 mg/L	<=0.015	05/05/2011
Uranium	<0.0005 mg/L	<=0.03	05/05/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F

S283769

ODW

469079

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 11:29

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility #_____
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # 01
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine____X____mg/L Total Chlorine____X____mg/L X **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283769 (469079)	**Date Collected:**	04/28/2011 11:29 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	O.T.	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

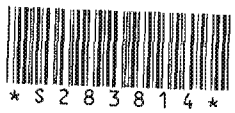
Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0005 mg/L	<=0.004	05/05/2011
Chromium	0.0035 mg/L	<=0.1	05/05/2011
Manganese	**0.1653 mg/L**	<=0.05	05/05/2011
Nickel	0.0051 mg/L		05/05/2011
Zinc	0.0464 mg/L	<=5	05/05/2011
Arsenic	<0.0005 mg/L	<=0.01	05/05/2011
Selenium	<0.010 mg/L	<=0.05	05/05/2011
Cadmium	<0.0005 mg/L	<=0.005	05/05/2011
Antimony	<0.0005 mg/L	<=0.006	05/05/2011
Barium	0.2314 mg/L	<=2.0000	05/05/2011
Mercury	<0.0005 mg/L	<=0.002	05/05/2011
Thallium	<0.0005 mg/L	<=0.002	05/05/2011
Lead	0.0021 mg/L	<=0.015	05/05/2011
Uranium	<0.0005 mg/L	<=0.03	05/05/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F



ODW 469057

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 10:14

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility #_____
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Seaford DE Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____ X ____ mg/L Total Chlorine ____ X ____ mg/L X **Not Chlorinated**

pH Field Test _____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth. _____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:** _____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283814 (469064)	**Date Collected:**	04/28/2011 10:14 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	QT/ Ex. 6 Personal Privacy (PP)	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/09/2011
Chromium	0.0031 mg/L	<=0.1	05/09/2011
Manganese	0.0057 mg/L	<=0.05	05/09/2011
Nickel	0.0006 mg/L		05/09/2011
Zinc	<0.010 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.0642 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0038 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F *S283811*

ODW 469046

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 11:07

PWSID # _PRIVATE_ **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # 01
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____ X ____ mg/L Total Chlorine ____ X ____ mg/L X **Not Chlorinated**

pH Field Test _____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth. _____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:** _____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283811 (469066)	**Date Collected:**	04/28/2011 11:07 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	OT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0007 mg/L	<=0.004	05/09/2011
Chromium	0.0242 mg/L	<=0.1	05/09/2011
Manganese	**0.0930 mg/L**	<=0.05	05/09/2011
Nickel	0.0765 mg/L		05/09/2011
Zinc	0.0172 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.0767 mg/L	<=2.0000	05/09/2011
Mercury	0.0010 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0019 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F *S283809*

ODW 469067

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 10:56

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford DF
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____X____mg/L Total Chlorine ____X____mg/L X Not Chlorinated

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283809 (469067)	**Date Collected:**	04/28/2011 10:56 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	QT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/09/2011
Chromium	0.0029 mg/L	<=0.1	05/09/2011
Manganese	**0.2179 mg/L**	<=0.05	05/09/2011
Nickel	0.0020 mg/L		05/09/2011
Zinc	0.0249 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.1361 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	<0.0005 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

Bar Code Number:
F *S283807*
ODW
469069

TEST Request:
☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

*Confirmation & *Replacement Requires Original Sample #

_____

Collection Date: 4/28/2011

Collection Time: (military) 10:42

PWSID #_PRIVATE___ Supply Name: Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP)
(For example: Treatment Plant, Sampling Station, or Distribution System)

Facility # Seaford DE
(For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # 01
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine____X_____mg/L Total Chlorine_____X____mg/L X Not Chlorinated

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]
☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]
☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]
☐ **Mn** ☐ **Cu**
☐ **Anions** [NO_3, NO_2, F, Cl]
CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283807 (469069)	**Date Collected:**	04/28/2011 10:42 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	OT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0008 mg/L	<=0.004	05/09/2011
Chromium	0.0014 mg/L	<=0.1	05/09/2011
Manganese	**0.2023 mg/L**	<=0.05	05/09/2011
Nickel	0.0061 mg/L		05/09/2011
Zinc	0.0233 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.4221 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0006 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F *S283805*
ODW 469070

TEST Request:
☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

*Confirmation & *Replacement Requires Original Sample #

_____

Collection Date: 4/28/2011

Collection Time: (military) 10:31

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Well Tap Sample Point # W.T
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____X____mg/L Total Chlorine ____X____mg/L X **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]
☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]
☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]
☐ **Mn** ☐ **Cu**
☐ **Anions** [NO_3, NO_2, F, Cl]
CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283805 (469070)	**Date Collected:**	04/28/2011 10:31 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	WT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP) SEAFORD DE	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0038 mg/L	<=0.004	05/09/2011
Chromium	0.0016 mg/L	<=0.1	05/09/2011
Manganese	**0.1906 mg/L**	<=0.05	05/09/2011
Nickel	0.0112 mg/L		05/09/2011
Zinc	1.4265 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.8478 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0010 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F

ODW

469072

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: __4/28/2011_____

Collection Time: (military) 10:06

PWSID # _PRIVATE___ **Supply Name:** _____ Ex. 6 Personal Privacy (PP)

Facility Name: _____ Ex. 6 Personal Privacy (PP) _____ Facility #_____
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Ex. 6 Personal Privacy (PP) Sample Point # OT
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	**Collector's Name**	Collector's Phone	Collector's Fax #
___DE-331_____	**___McClain_____**	**__382-6704_____**	**__741-8631__**

Free Chlorine____X_____mg/L Total Chlorine_____X____mg/L **X Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X TRACE: (mg/L) [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283803 (469072)	**Date Collected:**	04/28/2011 10:06 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	OT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0005 mg/L	<=0.004	05/09/2011
Chromium	0.0013 mg/L	<=0.1	05/09/2011
Manganese	**0.0977 mg/L**	<=0.05	05/09/2011
Nickel	0.0046 mg/L		05/09/2011
Zinc	0.0422 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.5250 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0006 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

S
ODW
S283801
Note: 469074

TEST Request:

☐ Routine	☐ Complaint	☐ Confirmation*
X Special	☐ MRT	☐ Field Blank
☐ Split	☐ Duplicate	☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 0955

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility #_____
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point Ex. 6 Personal Privacy (PP) Sample Point # O.T.
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine____X____mg/L Total Chlorine____X____mg/L X **Not Chlorinated**

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]

☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]

☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]

☐ **Mn** ☐ **Cu**

☐ **Anions** [NO_3, NO_2, F, Cl]

CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283801 (469074)	**Date Collected:**	04/28/2011 9:55 an
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	QT	**Date Received:**	04/29/2011 12:20 pı
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	0.0017 mg/L	<=0.004	05/09/2011
Chromium	0.0023 mg/L	<=0.1	05/09/2011
Manganese	**0.0823 mg/L**	<=0.05	05/09/2011
Nickel	0.0071 mg/L		05/09/2011
Zinc	0.3646 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.2745 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0018 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL

CHEMICAL FORM

Delaware Public Health Laboratory
30 Sunnyside Road
Smyrna, DE 19977
(302) 223-1520

F *S283799*

ODW 46925

TEST Request:

☐ Routine ☐ Complaint ☐ Confirmation*
X Special ☐ MRT ☐ Field Blank
☐ Split ☐ Duplicate ☐ Replacement*

***Confirmation & *Replacement Requires Original Sample #**

_____

Collection Date: 4/28/2011

Collection Time: (military) 10:21

PWSID # PRIVATE **Supply Name:** Ex. 6 Personal Privacy (PP)

Facility Name: Ex. 6 Personal Privacy (PP) Facility # Seaford
(For example: Treatment Plant, Sampling Station, or Distribution System) (For example: TP001, SS001, DS001, or WL001/DNREC ID#)

Sample Point _____ Sample Point # O. T
(For example: DEP001, MRT001, SP042, or WT001)

AST/Operator #	Collector's Name	Collector's Phone	Collector's Fax #
DE-331	McClain	382-6704	741-8631

Free Chlorine ____X____mg/L Total Chlorine ____X____mg/L X Not Chlorinated

pH Field Test_____ Monitoring Schedule: ☐ Mthly. ☐ Qtr. ☐ Ann. ☐ Tri. ☐ Oth._____

Analyte Group: Please check box of individual test required.

☐ **ROUTINE: (mg/L)** [NO_3, NO_2, Fe, Na, pH, F, Cl,]
☐ **FULL CHEM: (mg/L)** [Routine Chem. plus: Alk, Hardness, TDS]
☐ **Sulfate**

X **TRACE: (mg/L)** [As, Ba, Be, Cd, Cr, Pb, Hg, Ni, Se, Sb, Tl]
☐ **Mn** ☐ **Cu**
☐ **Anions** [NO_3, NO_2, F, Cl]
CN

☐ **VOCs** ☐ **TTHM** EPA 524.2 ☐ **HAA5** EPA 552.2 ☐ **Pesticides** EPA 505 ☐ **Herbicides** EPA 515.1 ☐ **508** ☐ **525**

☐ **531** ☐ **504** ☐ **Gross Alpha** ☐ **Radium 226/228** ☐ **Other:**_____

Field Blank ID Number: _____

Division of Public Health Office of Drinking Water
43 S. DuPont Highway
Dover, DE 19901
Ph: (302) 741-8630, FAX: (302) 741-8631 or (302) 661-7228

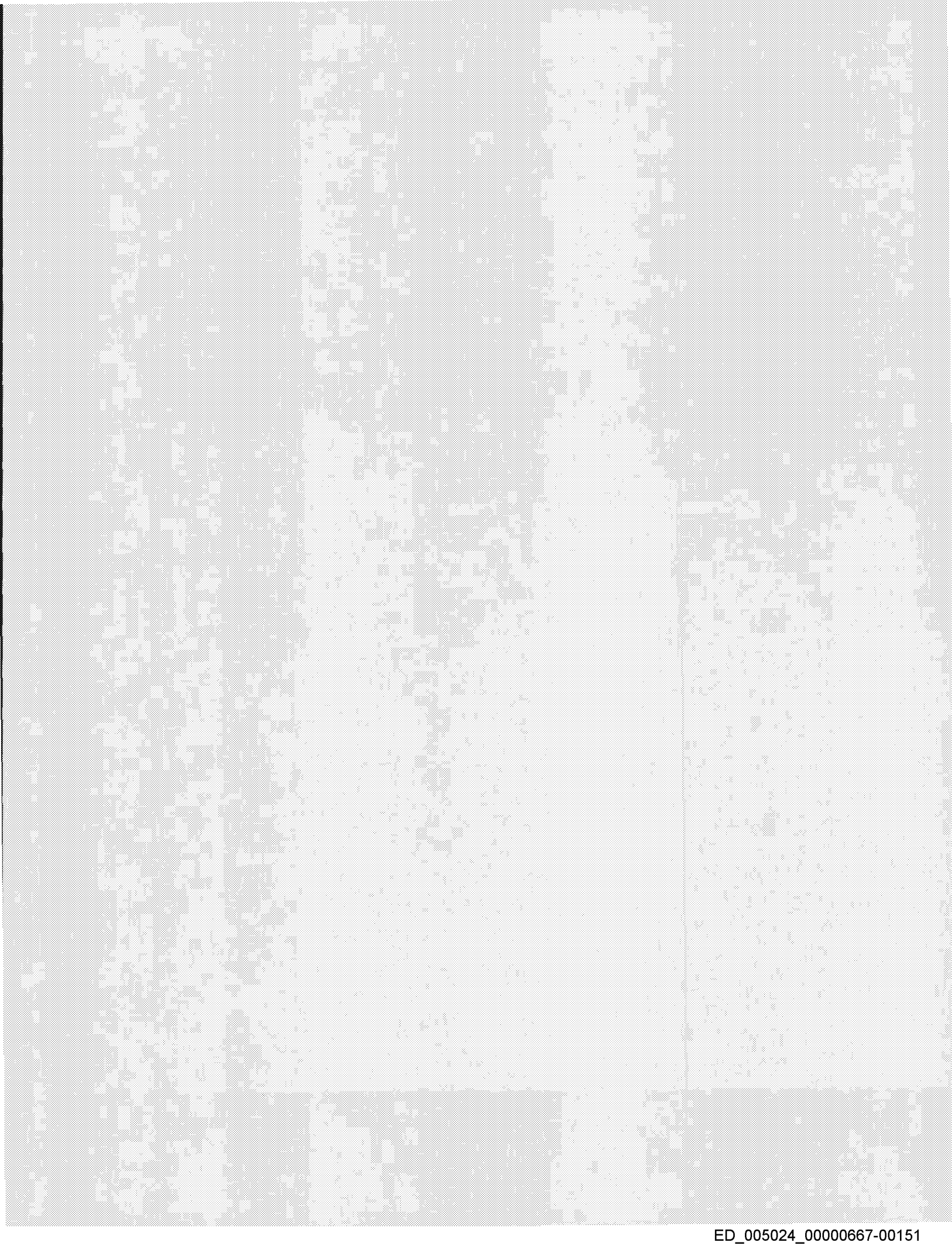
Delaware Health and Social Services
Division of Public Health Laboratory
30 Sunnyside Road
Smyrna, Delaware 19977
Phone: (302) 223-1520 Fax: (302) 653-2877

Agency:	Office of Drinking Water		
Label ID (Sample #):	S283799 (469075)	**Date Collected:**	04/28/2011 10:21 a
Property Owner/Facility:	Ex. 6 Personal Privacy (PP)	**Collected By:**	MCCLAIN
PWSID:	PRIVATE	**Collector ID:**	331
Sample Point:	OT	**Date Received:**	04/29/2011 12:20 p
Sample Location:	Ex. 6 Personal Privacy (PP)	**Sampled pH:**	
Sample Type:	SP	**Free Cl:**	
Chlorination:	Not Chlorinated or Tested	**Total Cl:**	
Notes / Comments:	ZINC ALSO PLEASE		

Specimen Note:

Test	Result	MCL	Date Released
EPA200.8			
Beryllium	<0.0005 mg/L	<=0.004	05/09/2011
Chromium	0.0012 mg/L	<=0.1	05/09/2011
Manganese	0.0408 mg/L	<=0.05	05/09/2011
Nickel	0.0025 mg/L		05/09/2011
Zinc	0.0303 mg/L	<=5	05/09/2011
Arsenic	<0.0005 mg/L	<=0.01	05/09/2011
Selenium	<0.010 mg/L	<=0.05	05/09/2011
Cadmium	<0.0005 mg/L	<=0.005	05/09/2011
Antimony	<0.0005 mg/L	<=0.006	05/09/2011
Barium	0.2289 mg/L	<=2.0000	05/09/2011
Mercury	<0.0005 mg/L	<=0.002	05/09/2011
Thallium	<0.0005 mg/L	<=0.002	05/09/2011
Lead	0.0029 mg/L	<=0.015	05/09/2011
Uranium	<0.0005 mg/L	<=0.03	05/09/2011

FINAL



ATLANTIC COAST
Laboratories, Incorporated

630 Churchmans Road
Newark, Delaware 19702
302-266-9121 • 454-8720 (FAX)
WWW.ATLANTICCOASTLABS.COM

REPORT OF ANALYSIS

Delaware Division of Public Health
43 S. Dupont Highway
Dover, DE 19901

Order Number A11041628
Project Name: ODW
Receive Date: 4/29/2011
Client Code: DEL_HEALTH

Attention: Ms. Anita Beckel

The reported results relate only to the samples as received by the laboratory. This report shall not be reproduced except in full without the written permission of the laboratory or client.

The following abbreviations may appear in this report: RL refers to Reporting Limit N/A refers to Not Applicable

Any organic compound containing (Surr) at the beginning of the compound name is a surrogate compound added to all samples to monitor the analytical process and is reported in % Recovery.

The following data qualifiers may be used in this report. The data qualifier(s) will appear in the qualifier column of this report.

Data Qualifiers:
- B Analyte detected in laboratory blank. Result may be biased high.
- Y Laboratory Control Sample outside the acceptance criteria.
- X Analyte hold time was exceeded.
- J Analyte present. Reported value may not be accurate or precise.
- S Surrogate outside acceptance criteria.
- E Analyte concentration exceeded the upper limit of calibration curve.

The following tests have a maximum hold time of 15 minutes. If the test is not performed in the field then the result may not be suitable for regulatory purposes. (pH, sulfite, chlorine free, and chlorine total)

Laboratory Accreditations: State of Delaware - DE00011 State of Pennsylvania - 68-335
State of Maryland - #138 State of New Jersey - DE568

Report comments applicable to this order number appear below:

Approved: Ex. 4 CBI
President

Reported: 5/13/2011 3:11:41 PM

ATLANTIC COAST
Laboratories, Incorporated

630 Churchmans Road
Newark, Delaware 19702
302-266-9121 • 454-8720 (FAX)
WWW.ATLANTICCOASTLABS.COM

Delaware Division of Public Health **Order Number: A11041628**

Sample # A11041628-01 **Sample Date: 4/28/2011 10:13**

Site: Matrix: Drinking Water
Client Sample ID: S283813
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/2/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-02 **Sample Date: 4/28/2011 10:21**

Site: Matrix: Drinking Water
Client Sample ID: S283812
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/2/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-03 **Sample Date: 4/28/2011 11:06**

Site: Matrix: Drinking Water
Client Sample ID: S283810
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/2/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	0.02		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-04 **Sample Date: 4/28/2011 10:55**

Site: Matrix: Drinking Water
Client Sample ID: S283808
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/2/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-05 **Sample Date: 4/28/2011 10:41**

Site: Matrix: Drinking Water
Client Sample ID: S283806
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Approved: Ex. 4 CBI
President

Reported: 5/13/2011 3:11:41 PM

ATLANTIC COAST
Laboratories, Incorporated

630 Churchmans Road
Newark, Delaware 19702
302-266-9121 • 454-8720 (FAX)
WWW.ATLANTICCOASTLABS.COM

Delaware Division of Public Health **Order Number: A11041628**

Sample # A11041628-06 **Sample Date: 4/28/2011 10:30**

Site: Matrix: Drinking Water
Client Sample ID: S283804
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-07 **Sample Date: 4/28/2011 10:05**

Site: Matrix: Drinking Water
Client Sample ID: S283802
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-08 **Sample Date: 4/28/2011 9:54**

Site: Matrix: Drinking Water
Client Sample ID: S283800
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-09 **Sample Date: 4/28/2011 11:57**

Site: Matrix: Drinking Water
Client Sample ID: S283774
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Sample # A11041628-10 **Sample Date: 4/28/2011 11:43**

Site: Matrix: Drinking Water
Client Sample ID: S283772
Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/4/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/4/2011 10:19:00 AM	Ex. 4 CBI

Approved: Ex. 4 CBI
President

Reported: 5/13/2011 3:11:41 PM

ATLANTIC COAST
Laboratories, Incorporated

630 Churchmans Road
Newark, Delaware 19702
302-266-9121 • 454-8720 (FAX)
WWW.ATLANTICCOASTLABS.COM

Delaware Division of Public Health **Order Number: A11041628**

Sample # A11041628-11 **Sample Date: 4/28/2011 11:36**

Site: Matrix: Drinking Water

Client Sample ID: S283770

Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/6/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/11/2011 3:11:00 PM	Ex. 4 CBI

Sample # A11041628-12 **Sample Date: 4/28/2011 11:28**

Site: Matrix: Drinking Water

Client Sample ID: S283768

Sample Comments: None

Test	Result	Qualifier	RL	Units	Method	Analysis Date	Analyst
Cyanide, Distillation	5/6/11		N/A	Date Completed	EPA 335.4		
Cyanide, Total	< 0.01		0.01	mg/L	EPA 335.4	5/11/2011 3:11:00 PM	Ex. 4 CBI

Approved: Ex. 4 CBI
President

Reported: 5/13/2011 3:11:41 PM

Atlantic Coast
Laboratories Inc.
630 Churchmans Road
Newark, Delaware 19702
ACLI@atlanticcoastlabs.com
302-266-9121 454-8720 (FAX)

SAFE DRINKING WATER ACT (SDWA)
CHAIN OF CUSTODY RECORD
STATE OF DELAWARE

DHSS
OFFICE OF DRINKING WATER
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, DE 19901
302-741-8630 741-8631 (FAX)

	Preservative	NH_4Cl	$Na_2S_2O_3$	$Na_2S_2O_3$	NaOH	$Na_2S_2O_3$	2mL HCL
	Container Type	Clear Vial	Clear Vial	Clear Vial	Plastic	Amber G.	Amber G.
	Volume	40 mL	40 mL	40 mL	8 oz	1 L	1 L
	Number of Containers	2	3	3	1	1	1
	Analysis Requested	HAA5	504	505	Cyanide	515	525

Water Supply Name: O Del

Comments:

Barcode	Date	Time	Number of Containers for one sample slip
S283813	4/28/11	10:13	1
S283812	4/28/11	10:20	1
S283810	4/28/11	11:06	1
S283808	4/28/11	10:55	1
S283806	4/28/11	10:41	1
S283804	4/28/11	10:30	1
S283802	4/28/11	10:05	1
S283800	4/28/11	09:54	1
S283774	4/28/11	11:57	1
S283772	4/28/11	11:43	1
S283770	4/28/11	11:36	1
S283768	4/28/11	11:28	1

Order ID: A11041628

Ex. 4 CBI

Ex. 4 CBI

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
	4/28/11	17:00		4/28/11	17:00
	4/29/11	9:30		4/29/11	09:30
	4/29/11	14:25		4/29/11	14:25

Temp Received: 2.2°

Page____ of ____

CLIENT REQUEST/COMPLAINT

Originator: Ex. 4 CBI

Date Initiated: 6/1

Submitted To: (Quality Assurance Manager) Operations Manager Technical Director
(Circle one)

Date Submitted:

Del Health. - DNREC. John.cargill@state.de.us.

Nature of Request/Problem (Provide a Brief Description):

A11041628-3 hit cyanide 0.02 5/4 1019

p/s CK # - their limit is 0.01

if ok- needs copies of data/QC

Actions Taken:

QC check okay
Data provided

Completed by: Ex. 4 CBI Date: 6/24/11

Attach additional pages as necessary using Correction Action Continuation Sheet

CYANIDE ANALYSIS

Date/Time of Anlaysis 04-May-11 10:19
File Name: C050411.FDT

Analyst: Amy
Reviewed by: [signature]

Date: 5/4/11

LFB Conc. 0.206
ICV Conc. 0.200

Sample Identification	Cup Number	Sample Type	Manual Dilution	Weight	Result	Units	MDL	Comments	Sample RPD / % Recovery		LFB and CCV % Recovery	QC Status	Total or Free Cyanide (Circle One)
cal std 0.50 mg/L	1	CalStd	1	1	6170368.000	uv-s							Total Free
cal std 0.20 mg/l	2	CalStd	1	1	2790144.000	uv-s							Total Free
cal std 0.10 mg/L	3	CalStd	1	1	1474086.000	uv-s							Total Free
cal std 0.05 mg/l	4	CalStd	1	1	747238.000	uv-s							Total Free
cal std 0.02 mg/l	5	CalStd	1	1	324109.000	uv-s							Total Free
cal std 0.01 mg/l	6	CalStd	1	1	188058.000	uv-s							Total Free
cal std 0.005 mg/l	7	CalStd	1	1	110541.000	uv-s							Total Free
cal std 0.000 mg/l	8	CalStd	1	1	0.000	uv-s							Total Free
ccv2	4	AbsChkSt	1	1	0.050	mg/L	0.005				99%	PASS	Total Free
ccb	8	Blank	1	1	ND	mg/L	0.005				Pass	~~FAIL~~	Total Free
icv	9	AbsChkSt	1	1	0.220	mg/L	0.005				110%	PASS	Total Free
icb	8	Blank	1	1	ND	mg/L	0.005					PASS	Total Free
blk 4/29/11	1	Blank	1	1	ND	mg/L	0.005						Total Free
lfb	2	RelChkStd	1	1	0.219	mg/L	0.005				106%	PASS	Total Free
a11041572-02	3	Dup1	1	1	ND	mg/L	0.005						Total Free
a11041572-02	4	Dup2	1	1	ND	mg/L	0.005		0.0%				Total Free
a11041572-02	5	Spiked	1	1	0.173	mg/L	0.005			84%			Total Free
a11041370-04	6	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041373-04	7	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041415-03	8	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041482-02	9	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041577-04	10	Unknown	1	1	ND	mg/L	0.005						Total Free
blk 5/2/11	11	Blank	50	1	ND	mg/L	0.25						Total Free
lfb	12	RelChkStd	50	1	0.206	mg/L	0.25				100%	PASS	Total Free

CYANIDE ANALYSIS

Date/Time of Anlaysis 04-May-11 10:19 Analyst: Amy LFB Conc. 0.206
File Name: C050411.FDT Reviewed by: _____ Date: _____ ICV Conc. 0.200

Sample Identification	Cup Number	Sample Type	Manual Dilution	Weight	Result	Units	MDL	Comments	Sample RPD / % Recovery		LFB and CCV % Recovery	QC Status	Total or Free Cyanide (Circle One)
a11041341-01 solid	13	Dup1	50	1	0.257	mg/L	0.25						Total Free
a11041341-01 solid	14	Dup2	50	1	0.320	mg/L	0.25		-21.7%				Total Free
a11041341-01 solid	15	Spiked	50	1	9.622	mg/L	0.25			90%			Total Free
1104020-01a solid	16	Unknown	50	1	ND	mg/L	0.25						Total Free
blk 5/2/11	17	Blank	1	1	ND	mg/L	0.005						Total Free
lfb	18	RelChkStd	1	1	0.200	mg/L	0.005				97%	PASS	Total Free
a11041579-05	19	Dup1	1	1	ND	mg/L	0.005						Total Free
a11041579-05	20	Dup2	1	1	ND	mg/L	0.005		0.0%				Total Free
a11041579-05	21	Spiked	1	1	0.209	mg/L	0.005			101%			Total Free
a11041617-03	22	Unknown	1	1	ND	mg/L	0.005						Total Free
CCV-Cyanide	2	AbsChkSt	1	1	0.202	mg/L	0.005				101%	PASS	Total Free
CCB-Cyanide	8	Blank	1	1	ND	mg/L	0.005					PASS	Total Free
a11041628-01	23	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041628-02	24	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041628-03	25	Unknown	1	1	0.017	mg/L	0.005						Total Free
a11041628-04	26	Unknown	1	1	ND	mg/L	0.005						Total Free
blk 5/4/11	27	Blank	1	1	ND	mg/L	0.005						Total Free
lfb	28	RelChkStd	1	1	0.215	mg/L	0.005				104%	PASS	Total Free
a11041628-05	29	Dup1	1	1	ND	mg/L	0.005						Total Free
a11041628-05	30	Dup2	1	1	ND	mg/L	0.005		0.0%				Total Free
a11041628-05	31	Spiked	1	1	0.203	mg/L	0.005			99%			Total Free
a11041628-06	32	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041628-07	33	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041628-08	34	Unknown	1	1	ND	mg/L	0.005						Total Free

CYANIDE ANALYSIS

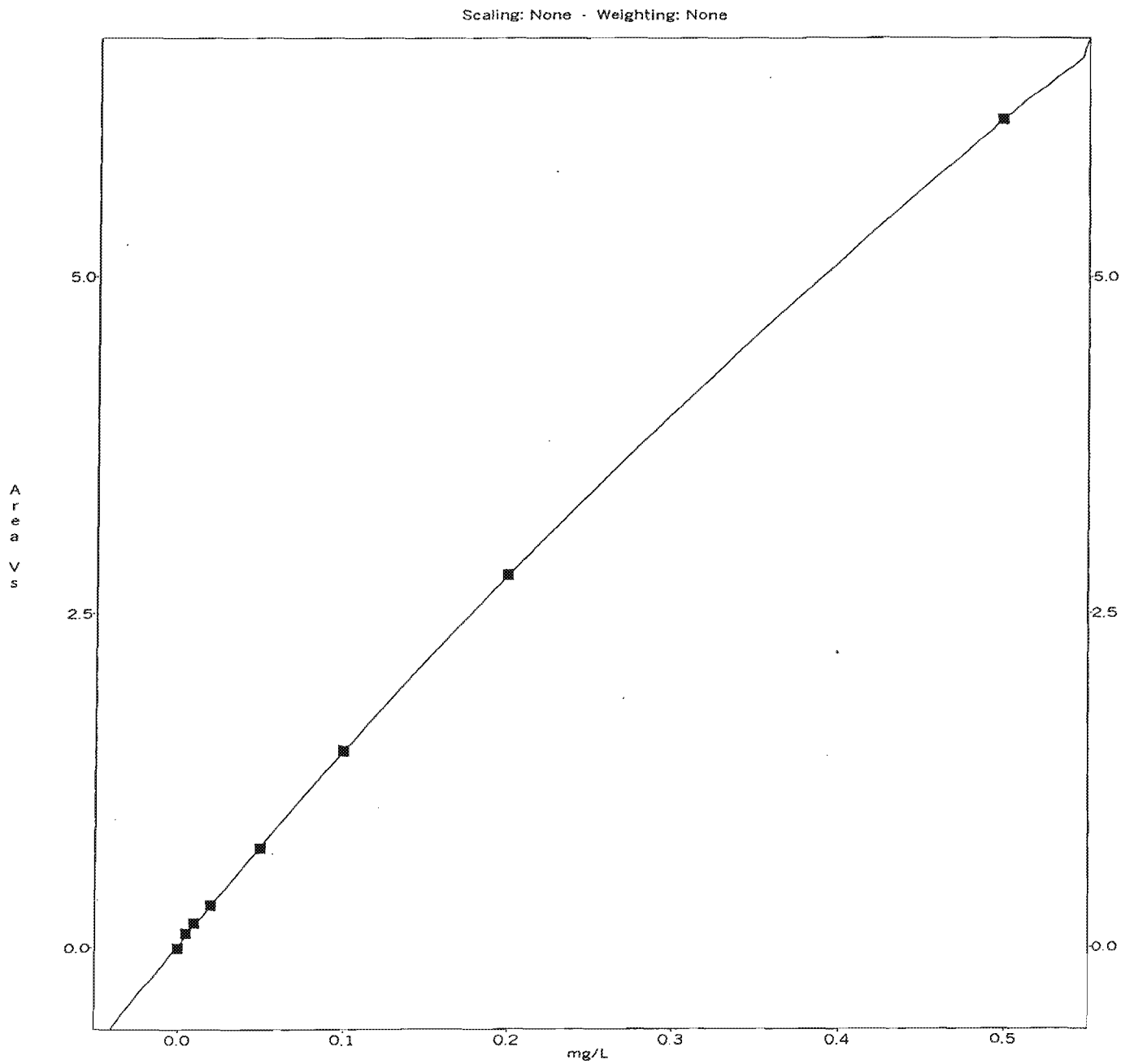
Date/Time of Anlaysis 04-May-11 10:19 Analyst: Amy LFB Conc. 0.206
File Name: C050411.FDT Reviewed by: _____ Date: _____ ICV Conc. 0.200

Sample Identification	Cup Number	Sample Type	Manual Dilution	Weight	Result	Units	MDL	Comments	Sample RPD / % Recovery		LFB and CCV % Recovery	QC Status	Total or Free Cyanide (Circle One)
a11041628-09	35	Unknown	1	1	ND	mg/L	0.005						Total Free
a11041628-10	36	Unknown	1	1	ND	mg/L	0.005						Total Free
CCV-Cyanide	2	AbsChkSt	1	1	0.201	mg/L	0.005				100%	PASS	Total Free
CCB-Cyanide	8	Blank	1	1	ND	mg/L	0.005					PASS	Total Free

Cyanide, Total

Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 2nd Poly
1	6170368	0.500	6170368					0.0	0.0	0.0
2	2790144	0.200	2790144					0.0	0.0	-0.1
3	1474086	0.100	1474086					0.0	0.0	-0.1
4	747238	0.050	747238					0.0	0.0	2.6
5	324109	0.020	324109					0.0	0.0	-0.4
6	188058	0.010	188058					0.0	0.0	-10.9
7	110541	0.005	110541					0.0	0.0	-20.1
8	0	0.000	0					0.0	0.0	

2nd Order Poly
Conc = 2.665e-015 Area² + 6.477e-008 Area - 1.189e-003
r = 1.0000



Printed: Wednesday, May 04, 2011 - 10:59 AM

Creator: Ex. 4 CBI
Creation Date: May 4, 2011 8:04:47
Last Modified: May 4, 2011 9:28:26
Description: Cyanide-Distilled

Cup #	Sample ID	Manual Dilution	Sample Type	
1	cal std 0.50 mg/L	1.0000	CalStd	
2	cal std 0.20 mg/l	1.0000	CalStd	
3	cal std 0.10 mg/L	1.0000	CalStd	
4	cal std 0.05 mg/l	1.0000	CalStd	
5	cal std 0.02 mg/l	1.0000	CalStd	
6	cal std 0.01 mg/l	1.0000	CalStd	
7	cal std 0.005 mg/l	1.0000	CalStd	
8	cal std 0.000 mg/l	1.0000	CalStd	
1	blk 4/29/11	1.0000	Blank	
2	lfb	1.0000	RelChkStd	
3	a11041572-02	1.0000	Dup1	
4	a11041572-02	1.0000	Dup2	
5	a11041572-02	1.0000	Spiked	
6	a11041370-04	1.0000	Unknown	
7	a11041373-04	1.0000	Unknown	
8	a11041415-03	1.0000	Unknown	
9	a11041482-02	1.0000	Unknown	
10	a11041577-04	1.0000	Unknown	
11	blk 5/2/11	50.0000	Blank	
12	lfb	50.0000	RelChkStd	
13	a11041341-01 solid	50.0000	Dup1	
14	a11041341-01 solid	50.0000	Dup2	
15	a11041341-01 solid	50.0000	Spiked	
16	1104020-01a solid	50.0000	Unknown	
17	blk 5/2/11	1.0000	Blank	
18	lfb	1.0000	RelChkStd	
19	a11041579-05	1.0000	Dup1	
20	a11041579-05	1.0000	Dup2	
21	a11041579-05	1.0000	Spiked	
22	a11041617-03	1.0000	Unknown	
23	a11041628-01	1.0000	Unknown	
24	a11041628-02	1.0000	Unknown	
25	a11041628-03	1.0000	Unknown	
26	a11041628-04	1.0000	Unknown	
27	blk 5/4/11	1.0000	Blank	
28	lfb	1.0000	RelChkStd	
29	a11041628-05	1.0000	Dup1	
30	a11041628-05	1.0000	Dup2	
31	a11041628-05	1.0000	Spiked	
32	a11041628-06	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type	
33	a11041628-07	1.0000	Unknown	
34	a11041628-08	1.0000	Unknown	
35	a11041628-09	1.0000	Unknown	
36	a11041628-10	1.0000	Unknown	

CYANIDE DISTILLATION LOGBOOK

Analyst: RLD

Block Pos.	Sample Type	Sample Number	Date/Time of Digestion	Chlorine Present	Sulfide Present	pH Check	Volume/Wt Digested	Analysis (Total or Free)
1-1	Blk		5-2-11 13:00	Y (N)	Y (N)	12	50	(T) F
1-2	LFB			Y N	Y N	12		T F
1-3	S1	A11041579-05		Y N	Y N	11		T F
1-4	S1 dup	↓		Y N	Y N	↓		T F
1-5	S1 spk			Y N	Y N			T F
1-6	S2	A11041617-03		Y N	Y N	9		T F
1-7	S3	A11041628-01		Y N	Y N	9		T F
1-8	S4	A11041628-02		Y N	Y N	9		T F
1-9	S5	A11041628-03		Y N	Y N	9		T F
1-10	S6	A11041628-04	↓	Y N	Y N	9	↓	T F
2-1	S7			Y N	Y N			T F
2-2	S8			Y N	Y N			T F
2-3	S9			Y N	Y N			T F
2-4	S10			Y N	Y N			T F
2-5	Blk			Y N	Y N			T F
2-6	LFB			Y N	Y N			T F
2-7	S11			Y N	Y N			T F
2-8	S11 dup			Y N	Y N			T F
2-9	S11 spk			Y N	Y N			T F
2-10	S12			Y N	Y N			T F
3-1	S13			Y N	Y N			T F
3-2	S14			Y N	Y N			T F
3-3	S15			Y N	Y N			T F
3-4	S16			Y N	Y N			T F
3-5	S17			Y N	Y N			T F
3-6	S18			Y N	Y N			T F
3-7	S19			Y N	Y N			T F
3-8	S20			Y N	Y N			T F

Comments:

CYANIDE REAGENT PREPARATION LOG

Sodium Hydroxide, 0.25N

Date Prepared: 4/26/11 Analyst: ALW

Supplier and Lot Number: EMD B0510904 036

Solution ID: CN NaOH- 042611-1 (MMDDYY_X)

20 gm NaOH per 2000 mL Final Volume Expiration Date: 4/26/12

Magnesium Chloride Reagent

Date Prepared: 1/31/11 Analyst: ALW

Supplier and Lot Number: Ex. 4 CBI - H14472

Solution ID: CN MgCl- 013111-1 (MMDDYY_X)

510 gm MgCl2 6H2O per 1000 mL Final Vol. Expiration Date: 1/31/12

Sulfuric Acid, 1:1

Date Prepared: 4/18/11 Analyst: ALW

Supplier and Lot Number: EMD 49296

Solution ID: CN Acid- 041811-1 (MMDDYY_X)

500 mL conc. H2SO4 per 1000 mL Final Vol. Expiration Date: 4/18/12

Chloramine-T Solution

Date Prepared: 5/4/11 Analyst: ALW

Supplier and Lot Number: Ex. 4 CBI H 44616

Solution ID: CN ChlorT- 050411-1 (MMDDYY_X)

1.5 gm Chloramine-T per 250 mL Final Vol. Expiration Date: 5/5/11

Pyridine-bartituric acid Reagent

Date Prepared: 4-26-11 Analyst: ALW

Solution ID: CN PyrBar- 042611-1 (MMDDYY_X)

15 gm Barbituric Acid Supplier and Lot Number: Ex. 4 CBI J22592

75 mL Pyridine Supplier and Lot Number: H-28503

15 mL conc. HCL Supplier and Lot Number: EMD 50319

725 ~~Final~~ Volume of DI Expiration Date: 5/26/11

Phosphate Buffer

Date Prepared: 4-26-11 Analyst: ALW

Supplier and Lot Number: Ex. 4 CBI J11152 / H47152

Solution ID: CN Phos- 042611-1 (MMDDYY_X)

69 gm NaH2PO4·H2O per 500 mL Final Vol. Expiration Date: 5-26-11

CYANIDE CALIBRATION STANDARD SOLUTIONS PREPARATION LOG

1000 mg/L Stock Solution:

Date Prepared: 5-3-11 Analyst: ALW

Stock Cn Calibration Soln ID: CN Cal Stock- 050311-1 (MMDDYY-X)

KCN Supplier and Lot Number: CCI 20100970Y

KOH Supplier and Lot Number: Ex. 4 CBI G 38K52

0.2503 gm KCN and 0.20 gm KOH / 100 mL Expiration Date: 5-17-11

Intermediate Stock Cyanide solution, 10 mg/L:

Date Prepared: 5-3-11 Analyst: ALW

ID of Stock Cn Calibration Soln Used: 050311-1

Intermediate Cn Calibration Soln ID: CN Cal Inter- 050311-1 (MMDDYY-X)

5.0 mL of 1000 mg/L CN diluted to 100 mL 0.25N Expiration Date: 5-10-11

Intermediate Cyanide Calibration Solution, 1.0 mg/L:

Date Prepared: 5-3-11 Analyst: ALW

ID of Intermediate Cn Calibration Soln Used: 050311-1

Inter. Cn Cal. Soln 1.0 mg/L ID: CN Cal Inter 1.0- 050311-1 (MMDDYY-X)

2.0 mL of 10 mg/L CN diluted to 100 mL 0.25N Expiration Date: 5-10-11

Preparation of Calibration Standards:

Date Prepared: 5-3-11 Analyst: ALW

ID of Intermediate Cn Calibration Soln Used: 050311-1

Standard Soln ID	mL of 1.0 mg/L Standard	Final Volume, mL	Conc., mg/L
Cn Cal Std 1- 050311-1	25.0	50.0	0.50
Cn Cal Std 2-	10.0	50.0	0.20
Cn Cal Std 3-	5.0	50.0	0.10
Cn Cal Std 4-	2.5	50.0	0.05
Cn Cal Std 5-	1.0	50.0	0.02
Cn Cal Std 6-	0.50	50.0	0.01
Cn Cal Std 7-	0.25	50.0	0.005
Cn Cal Std 8- ✓ (MMDDYY-X)	0.00	50.0	0.000

Expiration Date: 5-10-11

Standards are prepared in 0.25N NaOH

Note: MMDDYY-X is the identified added to each solution to provide a unique ID for each solution. MM is month, DD is day, YY is year and X is sequential number identifying a particular solution in the event more than one solution is prepared during the day.

CHECKLIST FOR CYANIDE BY FIA

Analysis Date: 5-4-11

Solution IDs:
Cn Cal 1- 050311-1 Cn Cal 2- 050311-1 Cn Cal 3- 050311-1
Cn Cal 4- 050311-1 CN Cal 5- 050311-1 CN Cal 6- 050311-1
Cn Cal 7- 050311-1 Cn LFB- 050311-1 Cn ICV- 042611-1
Cn NaOH- 042611-1 Cn MgCl- 013111-1 CN Acid- 041811-1
Cn ChlorT- 050411-1 Cn PyrBar- 042611-1 Cn Phos- 042611-1

Items in Data Package: Excel Spreadsheet ✓ Calibration Curve ✓
Auto sampler Table ✓

Copies of: Reagent Prep Log ✓ Spiking Soln. Prep Log ✓
ICV Prep Log ✓ Cal. Std. Prep Log ✓
Cyanide Distillation Logbook ✓ Excel Spreadsheet ✓

Quality Control Failures

Sample Type	Cup #	Sample Type	Cup #	Sample Type	Cup #	Sample Type	Cup #
~~LFB~~	~~2~~ (ALW)						
RPD	13/14						

Notes and Comments

Rerun 1

Rerun cups ~~17~~ 11-17 (ALW)

$\frac{(10.30 \times 2)}{100} = 0.206$

DONE

Initials of Analyst Reviewing and Submitting Data: ALW

Date Reviewed and Submitted: 5-4-11

Initials of Analyst Performing Second Level Review: [illegible]

Date Reviewed and Reported: 5/4/11

Cargill Iv John G. (DNREC)

From: Ex. 4 CBI @atlanticcoastlabs.com
Sent: Thursday, June 02, 2011 9:51 AM
To: Cargill Iv John G. (DNREC)
Subject: cyanide data.pdf
Attachments: cyanide data.pdf

<<...>>

Hello John, the QC check was ok for the cyanide hit. Data requested is in the attachment.
Ex. 4 CBI